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POLITICS AND BUSINESS.

WITHIN a week from this date the quadrennial national election will have occurred in the United States, and a certain feeling of suspense will have been lifted from millions of minds. But while the number of ballots to be registered on November 8 doubtless will be as large as at any preceding election—and possibly much larger, in view of the increase in population—there has been apparent no such popular excitement over the impending result as to disturb business in any way. Time was when it was regarded as a matter of course that a presidential campaign would rob business of all life for half a year, at least. True, there has never been any logical reason given why the choice of a president should be an occasion for stagnation in trade, but if the whole population decided in advance that the campaign months were to be a dull season, except in a political sense, the dullness very naturally developed.

This year appears to have afforded an exception to a rule which has been recognized for the past two generations. It cannot be said that the popular interest in politics, has declined, or that the business classes or the masses are really less concerned than in the past about the outcome of the election. But in a country like this popular sentiment ought to be, and doubtless is, more intelligent as public institutions advance in age, and most citizens nowadays do not fear any revolutionary tendency as a possible result of a general election.

Even when one political party supersedes another in control of the government, a radical change in policies rarely occurs, and a change in governmental methods is practically impossible within the limits of a single presidential term. The fact is that the government of the United States is vastly more conservative than is always recognized, either at home or abroad, and no matter what theories may be urged here or there in advance of an election, the government in power may be expected always to be responsive to the soundest business sense of the country as a whole whenever questions of vital importance are to be decided.

It is not to be assumed that the foregoing considerations, in so many words, have found place in the minds of all the voters in the country, but at any rate experience has taught those who have voted a few times that, whoever wins at the polls, the country is not brought to disaster. Hence, it is not necessarily a sign of apathy or a lack of patriotism if the average voter of to-day fails to feel alarm over the fate of the nation at the approaching election. Doubtless party feeling is as strong as ever, and, as we have intimated, the approaching vote may be the largest ever cast, but politics has not been allowed to occupy the minds of the people to the exclusion of business.

We feel that the situation is one upon which the people of the country are to be congratulated, as affording a vindication of the principles on which the government is founded. And doubtless the experience of the past summer will be repeated in future "presidential" years—a

matter of great gain to the country, which in an earlier period gave up one year in four to troubled suspense while awaiting the result of the November balloting.

So far as can be discerned at this time of the year, the rewards of production in every department have compared favorably with the showing of any past year. Crops of every kind appear to have been abundant, and selling prices favorable; manufacturing in every branch has been well maintained; and in whatever tends to enhance the wealth of the nation or to promote the prosperity of its citizens, 1904 seems destined to make a good record. Such being the situation to-day, a change can hardly come until there is a season of less abundant crops, or some unforeseen disaster overtakes industry. Present material conditions are not to be changed by any mere chance of political fortune, for which reason the purely trade journal, such as ours is, can well afford to leave to others the discussion of political platforms and candidates, feeling confident that in the end the intelligence of the people may always be depended on.

RUBBER AND THE CONGO QUESTION.

THE report that the president of the United States had decided not to attempt to interfere with respect to the administration of the Congo Free State appears to have been due to a misapprehension, but such a decision, in our opinion, would be wholly proper. The interest of this country in Congo affairs, from whatever point of view open to Mr. Roosevelt, we conceive to be much less substantial than that of the European powers identified with the Berlin treaty, and so long as the latter remain silent, the United States have no clear call to initiate the reforms for which a need is alleged to exist. Such action as has been erroneously reported from Washington would serve to nullify the work of the two recent distinguished English visitors on our shores—Mr. Morel, to attack, and Mr. Head, to defend, the administration of Leopold II, the sovereign of the Congo state. It might have the further effect of softening the asperity with which the Congo controversy has been waged beyond the Atlantic, by leaving neither side any reason to expect support from America. To this extent the effort to carry the war into this country would, in the end, prove productive of good.

Comment upon the purely political aspects of the Congo controversy is beyond the scope of THE INDIA RUBBER WORLD. We do not even know whether there is, or is not, a basis for the charge that commercial rather than humane motives have inspired what is called on the Continent the "British campaign" against the king of the Belgians. Our only reason for touching upon the matter at all is that it relates to a region which has become an important source of India-rubber supplies, and the effect of the administration of the Free State upon rubber production is a matter of interest alike to the United States and every other country where the Congo product is consumed. And in forming the views expressed below, we are not conscious of having been influenced by any "reform" or commercial or other organization in England or elsewhere.

The rate of increase in the production of rubber in the Congo Free State was for several years unprecedented in any country. Whereas, before the establishment of the State, practically no rubber had been exported from that region, the output soon attained the large volume of 13, 250,000 pounds for a single year. This was produced almost wholly by the labor of natives, not before accustomed to sustained or continuous work of any kind, and supposed to be disinclined to all forms of industry. It is inconceivable that millions of these almost uncivilized blacks should suddenly, of their own accord, rush to the forests to extract rubber—for uses unknown to them, by foreign peoples whose very existence they were not aware of. Only extraordinary promises of compensation for their work could be expected to lead such simple minded folk to engage willingly in gathering rubber. But proof is lacking that even living wages are paid to the Congolese. The published official statistics of imports on the Congo fail to indicate any fair return to the natives for their work in preparing the great quantities of rubber sent out, and the fact that people in such circumstances exert themselves on so great a scale for practically no tangible compensation might readily give rise to reports that armed force is the real incentive.

It certainly is pertinent to ask whether these conditions are favorable to the proper conservation of the rubber plants, without which the supply must ultimately cease, leaving the commerce of the Congo Free State, as now organized, without any basis. The Congo exports have shown a falling off since 1901, although rubber from that source shared in the general advance in price which has stimulated the extraction of rubber in other parts of the world. What concerns the rubber manufacturers, therefore, is not such questions regarding the Congo as have been debated in the British and Belgian parliaments, or such memorials as that presented at Washington. The question is whether the responsible heads of the Congo government are supporting or conniving at a policy of unnecessary exhaustion of important supplies of a much needed raw material.

"A STRANGE INDUSTRY" DISCOVERED.

THE able Brooklyn *Eagle* has suddenly made the surprising discovery that there is "value in old rubbers." But it is a bold assertion to make, that "Not one in a thousand New Yorkers is aware that one of the big industries of this country is the importation of old rubber shoes and goloshes." The latest official estimate of the population of the city (August 1, 1904) is 3,838,024. Is it not possible that two in a thousand of all these people suspect the truth?

Our contemporary thus explains why it remained so long in ignorance of an important commercial movement:

This importation has been going on for several years, and yet it has seemingly never attracted the attention of the alert chroniclers of interesting events, for the old shoes and goloshes have slipped into the country silently, hidden away on the manifests of the steamships and quickly sent to the consignees, who have eagerly paid the freight.

If these consignees had not been so eager to pay the freight, possibly three in a thousand New Yorkers might have been in the secret by this time.

The *Eagle* next tells us that "Primarily the cause for this strange industry is the ever-increasing demand for rubber in America." This certainly is clear enough, but what are we to understand from what follows: "The old rubber shoes come in bales, thousands of them every week, for the home consumption in Europe is not one-tenth of what it is in America." Does it mean that if the European consumption of rubber were larger, old rubber shoes from there might come in carboys instead of bales?

We cannot agree with our contemporary, however, that "All the old rubber shoes are gathered and shipped to Liverpool, which is, so far, the only shipping point from which the rubber has come to this side." Isn't Hamburg a "shipping point"? Or Odessa?

AFTER HEARING FOR MANY MONTHS of an incredible number of "rubber factories" starting, or about to start, in Colorado, the old established manufacturers in the Eastern states, who have been trembling at the prospect of increased competition, doubtless will feel relieved to learn that the whole thing, after all, possibly may have been a joke. The two extracts from able Colorado newspapers which follow may serve to throw a great light upon the subject:

I.

[FROM THE LA VETA ENTERPRISE.]

THE Alamosa *Independent Journal* of last week tells what Alamosa has in the way of business and what they want. One thing they want is a rubber factory. La Veta can beat Alamosa on that point, as every time a pretty girl goes down the street several rubber factories can be seen at work.

II.

[FROM THE ALAMOSA INDEPENDENT JOURNAL, SEPTEMBER 30.]

THAT'S right, brother; you can beat us, because Alamosa girls are all pretty and the boys' necks are about worn out. That's the reason we want a rubber factory.

Whatever may happen in other Colorado rubber centers, it does not appear likely that the old concerns have much to fear from the "rubber factories" of La Veta and Alamosa.

THE OPENING OF CABLE COMMUNICATION TO ALASKA is another triumph for the India-rubber industry of the United States. When ocean cables first began to be planned the United States, comparatively speaking, were rich in nothing but territorial possessions. The people of this country were busy in subjugating a virgin soil, covered for the most part with a heavy forest growth, to cultivation, and establishing new towns along the lines of new railways built with the aid of capital borrowed from Europe—and since repaid. The domestic requirements in the way of rubber goods were, it is true, supplied by home factories, but in no case did this call for such command of capital, by a single factory, as was involved in the building of ocean cables. Moreover, the American people were not then accustomed to making large investments abroad, such as would be required in large cable building operations. Hence the building of cables was allowed to proceed without much attention being paid to the subject on this side of the Atlantic. Recently, however, some American manufacturers have become determined to have a hand in submarine cable building, and within a short time they have constructed a greater length than would be required to cross the Atlantic twice, and the new cables are in successful operation. When the history of the new line to Alaska is written, it will be a story of overcoming difficulties unique in electrical engineering, and this in a country which took up cable building fifty years later than our competitors in Europe. Last, but not least in point of interest, is the fact that the new cable lines

constructed in America are all rubber insulated, which fact may go far in rendering the world, in days to come, independent of Gutta-percha in cable construction.

"CEARA RUBBER" IN NICARAGUA.

THE Nicaragua Rubber Co. was incorporated August 25, 1904, under the laws of New Jersey, to develop rubber plantations in the republic of Nicaragua and elsewhere. The company has been organized by the election of John E. Foster, of Corinto, Nicaragua, president; Austin Van Gieson, of Newark, New Jersey, secretary; and Charles M. Crawford, of New York, treasurer. The office of the company is at No. 800 Broad street, Newark. The company begins business by acquiring a plantation of Ceará rubber near La Paz, Nicaragua, owned by Mr. Foster, who has been engaged in business in that republic for a number of years, and his partner, C. H. McLaughlin.

The cultivation of Ceará rubber (*Manihot Glazovii*) was begun in Nicaragua about four years ago. The splendid condition of the plantings and the large yield and excellent quality of the product taken in trial tapplings, give promise of the success of the enterprise. The Ceará rubber tree is a dry land plant and will not prosper in a wet soil. In congenial climatic conditions and soil its early and abundant product and excellent quality make it most profitable to plant. The location in which it is being planted in Nicaragua is a part of the districts of La Paz and Momotombo, where the Momotombo mountain, by driving the clouds to one side, protects this section from the force of the tropical rains, so that it is comparatively dry, receiving just about enough water to grow corn, which is abundant for Ceará rubber. The soil is sandy, with an admixture of a little clay, and very deep and level or slightly rolling. The elevation above the sea is some 300 feet. The section is traversed by the Nicaragua Central railroad. The plantation of the Nicaragua Rubber Co. is the "San Nicolas," on which are the oldest and largest trees in this section. Three year old trees on this plantation measure 26 inches in girth three feet above the soil, and are over 30 feet high.

That Ceará rubber will yield at two years of age has been proved on the "San Nicolas" and neighboring plantations. Twenty-one trees from 14 to 21 months, with an average age of 14 months, were tapped, and together gave 7½ pounds of dry rubber. A tree 15 months old gave 3 ounces of rubber. Many trials have been made, with like results. Still it is not intended to tap until the trees are four years old, in order not to retard the best development. It is expected that four-year-old trees will produce one pound of rubber per tree, and from that time the product will augment rapidly. There are now in the district, outside of native plantings, four American plantations of *Manihot Glazovii*, the "San Nicolas," "La Victoria," "La Americano," and "El Trifufo," on which are planted some 200,000 trees, while as many more will be planted in another year.

FOR VENEZUELAN DEVELOPMENT.

A PUBLIC company under the style Venezuela India Rubber Trust, Limited, was registered in Guernsey, England, October 1; capital, £650,000 [= \$3,163,225], in £1 shares. Object, to acquire gum and essential oil enterprises, concessions, and properties, and India-rubber, Gutta-percha, and Balata forests, especially in the Orinoco valley, Venezuela; to develop and exploit the same, and to carry on any business incidental or auxiliary thereto. The names of the first directors are not given.

THE EDITOR'S BOOK TABLE.

SELF PROPELLED VEHICLES. A PRACTICAL TREATISE ON THE Theory, Construction, Operation, Care, and Management of all Forms of Automobiles. By James E. Homans, A.M. Second Revised Edition. New York: Theo. Audel & Co. 1904. [Cloth. 8vo. Pp. vii+652. Price, \$2.]

THE object which the author has had in mind has been the production of a book that would be "serviceable to owners of automobiles and to those desiring to qualify as practical chauffeurs, so far as the essential knowledge may be imparted by a book." He regards the automobile as a thoroughly practical machine, though its use has, in many cases, proved unsatisfactory—the builder often being blamed, when the fault lies with the owner, who has neglected to inform himself properly in regard to the construction of his machine, and how it should be used. Here, in more than two score chapters, are given, in simple and clear English, the principles of construction and operation, including suggestions for use in cases of emergency, the whole being illustrated by a large number of well chosen and well executed engravings.

Two of the chapters are headed "Solid Rubber Tires" and "The Use and Effect of Pneumatic Tires." Comprising 41 pages, with 30 small illustrations, these chapters cover the theory of the utility of the rubber tire, and suggest the fitness of certain types to certain conditions, together with very full instructions in regard to repairs.

Different makes of tires, as well as of automobiles, are referred to, and frequent credit is given to authors and publications quoted. The fact that a second and enlarged edition of this book follows the first edition within two years is evidence of the existence of a practical demand for such a work.

THE AMAZON: HISTORICAL, CHOROGRAPHICAL, AND STATISTICAL Outline, up to the Year 1903. By Lopes Gonçalves. First Edition. New York: Hugo J. Hanf. 1904. [Cloth. 8vo. Pp. ix+117; viii+112. Price, \$1.50.]

THIS is the English title of a book in two parts, one half of which contains the same matter in Portuguese, under the title "O Amazonas." The author is a distinguished member of the legal profession in Brazil, and a patriotic citizen of the Amazon state, as shown by the dedication of his book to two officials of the state who were influential in defending title to the Acre district as against Bolivia. The book is a handy and useful compendium of the history of Amazonas, and of facts regarding its natural resources and the development of its commerce. Naturally many references are made to India-rubber, which is the basis of the commerce of Manaus, the capital of the state, and of the shipping interests on the Amazon. The compilation of the work was incidental to the service of its author, first as a member of a commission to prepare a collection of Amazonas products for the St. Louis World's Fair, and later as the official representative of the state at the fair.

BRAZIL AT THE LOUISIANA PURCHASE EXPOSITION, ST. LOUIS, 1904. [Paper. 8vo. Pp. 160.]

BRAZIL. [EXTRACT FROM THE HISTORY OF THE LOUISIANA Purchase Exposition, Saint Louis, 1904.] [Paper. Folio. Pp. 20.]

THE Brazilian government made an appropriation equal to \$600,000 for a proper representation at the St. Louis World's Fair, in consequence of which, not only was there erected a beautiful and extensive national pavilion, but creditable exhibits of Brazilian natural and industrial products appeared in twelve of the fifteen departments of the fair. In the first of the publications of which the titles are given above, it is stated that the purpose is to serve rather as a souvenir of Brazil's participation in the St. Louis fair than as a comprehensive description of the resources of Brazil, though it is expected that the book will prove of value as a starting point for future investigation. In spite of this modest announcement, it is not too much to say that the handsomely illustrated volume before us gives a better view of the manifold resources of the leading South

American republic than has ever before appeared in the English language. The volume concludes with a classified list of all the Brazilian exhibits at St. Louis, from which it appears that specimens of rubber formed a part of no less than 16 exhibits, from the states of Grão Pará, Amazonas, Bahai, Matto Grosso, and São Paulo.—The second publication mentioned is a well drawn up and handsomely illustrated description of the Brazilian Pavilion and its contents, with references to the principal resources of the republic.

ANLEITUNG ZUR GEWICHTS-BERECHNUNG TECHNISCHER GUMMIWAREN. Sowie zur Ermittlung der Spezifischen Zahlen. Von Fritz Marzoll. Dresden: Steinkopf & Springer. 1904. [Cloth. 16 mo. Pp. 38. Price 1.50 marks.]

THIS is a guide to computing the weights of rubber goods of whatever kind, for the use of factory workers, dealers, or buyers of rubber goods, of particular use in cases where the selling price, considered in relation to weights, in any sense indicates quality. Likewise, the specific gravity of rubber compounds is indicated. The weights of rubber tubes and rings, with the most usual dimensions of thickness, diameter, etc., are given in tabular form, together with like details for threads, valves, buffers, and the like.

JUBILEE OF THE PLANTERS' ASSOCIATION OF CEYLON. 1854-1904. Illustrated Souvenir of the *Times of Ceylon*. Colombo: 1904. [8vo. 46 pages.]

THE association here named has done a work of incalculable value in advancing planting interests in Ceylon, and its leaders, whose lives are briefly sketched in this pamphlet, deserve a prominent place in the history of the island. To-day the association is devoting to the rubber planting interest, described in Mr. Pearson's letters in THE INDIA RUBBER WORLD, the same intelligent attention that, in earlier years, it gave to coffee, tea, and other products, and there is reason to believe that the results will be equally satisfactory.

ARTICLES IN CURRENT PERIODICALS.

A PROPOS d'un livre sur les plantes a Caoutchouc. By Aug. Chevalier. [Review of E. DeWildeman's "Les Lianes Caoutchoutifères du Congo."] = *Revue des Cultures Coloniales*, Paris. XV-152 (July 5, 1904.)

Le Manicoba de Bahia. By A. Cardozo. = *Journal d'Agriculture Tropicale*, Paris. IV-36 (June 30, 1904). Pp. 173-175.

Onze hedendaagsche kennis van het Caoutchouc en zijn voorkomen in de natuur. By W. R. Tromp de Haas (in *Teysmannia*, Batavia.) = *De Indische Mercur*, Amsterdam. XXVII-26 (June 28, 1904). Pp. 461-462.

Die *Kickxia elastica* (Preuss) und ihre Kultur. By Max Ziltzow. [An exhaustive paper on an African rubber species of interest.] = *Der Tropenpflanzer*, Berlin. VIII-5 (May, 1904). Pp. 228-250.

Caoutchouc-cultuur op Sumatra's Oostkust. = *De Indische Mercur*, Amsterdam. XXVI-52 (December 29, 1903). Pp. 883-884.

Ule's Expedition nach den Kautschuk-Gebieten des Amazonenstromes. By Ernest Ule. [Fifth and sixth reports, the latter relating to travels in Peru; followed by summary of results of the whole expedition.] = *Notisblatt des Königlichen Botanischen Gartens und Museums zu Berlin*. IV-33 (January 15, 1904.) Pp. 107-123.

THE COLORADO RUBBER INTEREST.

THE Riverside Crude and Refined Rubber Co. was incorporated August 11, 1904, under Colorado laws, with \$1,000,000 capital authorized, and with principal offices to be located in Denver. Simon L. Woodbury, George Leonhardy, Daniel D. Long, and others, are named in the incorporation papers. Mr. Leonhardy writes to THE INDIA RUBBER WORLD that the object of the company is "to gather the plant"—referring to the recently much discussed Colorado rubber shrub—"and manufacture the rubber therefrom, which we have experimented with and found beyond doubt that we can do."

THE PASSING OF THE OLDEST RUBBER IMPORTER.

DIED—At his home in Wellesley, Massachusetts, on Tuesday, October 11, 1904, after a protracted illness, GEORGE A. ALDEN, in his seventy-fifth year.

THE dean of the rubber importing trade in America—much longer engaged in the business than any of his survivors in any country—has finally closed his account with time, after first having placed a good balance on the right side, as a man and a citizen, as well as a merchant. It was no ordinary career with which this sketch has to deal. Its historic aspect alone would render it of interest. When Mr. Alden began the importation of rubber, Charles Goodyear's activity was at its height; he had not yet published his book, and his original vulcanization patent was still valid. Scarcely more than a score of rubber factories existed in this country, and their combined product was less than that of each of several factories now in the field. Mr. Alden, therefore, not only saw the growth of the rubber industry almost from the beginning, but it benefited in countless ways from his counsel and often from his active participation. Had he lived until August next, he would have been engaged in the trade for 50 years.

George Adelbert Alden was born April 7, 1830, at Hope, Maine, being the son of Silas and Sarah (Lindley) Alden. He was descended, in the seventh generation, from John Alden, who was one of the party that sailed in the *Mayflower*, and landed at Plymouth, Massachusetts, in 1620, and who was married the next year to Priscilla Mullens, a fellow passenger. The incidents of their courtship form the theme of Longfellow's "Courtship of Miles Standish." John Alden was a magistrate in the colony for more than 30 years, and outlived all the other signers of the *Mayflower* compact. In the succeeding generations were men of strength and of prominent activity in the history of New England, from whom the subject of this sketch derived the strong traits which made him long one of Boston's most representative business men.

In 1834 the father of George Alden settled in Bangor, Maine, where for many years he was engaged in the drug business, and died in his eighty-seventh year. George, who was the second of ten children, attended the public schools of Bangor, after which he assisted his father in the store until his eighteenth year, when he entered the retail department of William B. Little & Co., druggists, of Boston. In 1851 he went to Philadelphia, remaining two years, after which he returned to his former employers, then reorganized as George B. Little & Co., and remained with them as manager until 1855. In August of that year he engaged in business on his own account, as a broker in drugs and an importer of crude India-rubber. Two years later Isaac P. T. Edmands became a partner, under the

style of Alden & Edmands, and the importation of goat skins was added. In 1874 the firm was dissolved, Mr. Alden retaining the rubber business and Mr. Edmands taking the goat skins branch. Mr. Alden continued in business alone until 1878, when, his eldest son, having attained his majority, was admitted to partnership, under the firm name of George A. Alden & Co., which is still continued. Arthur W. Stedman was admitted as a partner in January, 1898.

Mr. Alden's success as a merchant was assured at the very threshold of his career. It was the result, in part, of the favorable conditions of the special trade in which he was engaged, but still more of the judgment and skill with which it was managed. The business of Mr. Alden's firm at an early date ranked among the largest in the importation of India-rubber and goatskins in the country. Their business in rubber has

always continued very large. In 1884 was organized, for the more extensive importation of this commodity, the New York Commercial Co., Limited, which in 1892 was changed to the New York Commercial Co., with a capital of \$2,500,000, with Mr. Alden, president and his son, Adelbert H. Alden, vice president and general manager. Subsequently branches were established at Pará and Manáos, under the style of Adelbert H. Alden, and in London and Liverpool, as Alden, Symington & Co. In 1880 the firm entered into the shellac business under the name of the New York Shellac Co., which is still continued. The importation of cocoa was added in 1887, and at times the company have been the largest importers of that article to the United States. In 1888 the business of exporting grain, petroleum, lumber, staves, and India-



GEORGE ADELBERT ALDEN.

rubber to various European companies was organized.

At an early period in his connection with the rubber importing trade, Mr. Alden began to hold an interest in manufacturing companies. At the time of his death—not to note some of his earlier connections with the industry—he was president of the Seamless Rubber Co., and a director of the Revere Rubber Co., the Easthampton Rubber Thread Co., and the Glendale Elastic Fabrics Co. He was also connected with various other financial and business enterprises, being a director in the Revere National Bank, the East Boston (Land) Co., and the Colonial Mutual Fire Insurance Co.

It has been said of Mr. Alden by one who had opportunity to watch his career and to discover the traits of character which were essential to its success, that "he has long been the most prominent figure in his line of business in New England, and for many years has been at the head of the largest business of its kind in the United States. It seems unnecessary to expatiate on the qualities required to accomplish the work he

has performed, or to go into details in explaining his success. The best evidence of his business capacity lies in the unadorned statement of what he has accomplished. Against strong competition to have maintained and constantly strengthened the position he has so long held in commercial circles; to have successfully met and been equal to the many changing conditions of trade, exhibit better than words of adulation, however merited, the strength of character and forceful nature of the man." The solidity of the business which he established is suggested by the fact that, although the loss incurred from the great fire of 1880 amounted to \$100,000, it caused no embarrassment.

Personally Mr. Alden was of medium height, compactly built, with an alert air, and possessed of an exceptionally pleasant manner. He was an exceedingly sound and capable man of business, and kept in touch with the markets of the world almost to the day of his death. One of his most distinguishing traits was his courage, which did not desert him even when stricken the third time, in July last, and partially paralyzed—but which led him constantly to talk and plan for the time when his recovery should be complete and his daily round at his offices, at bank meetings, and at the "rubber manufacturers' table" at the Trade Club luncheons, be resumed.

Mr. Alden was a member of the Algonquin Club of Boston, the Merchants' Club, Temple Club, Country Club, Boston Art Club, Pine Tree Club, Trade Club, Exchange Club, the Society of Mayflower Descendants of Massachusetts, and the Alden Kindred of America, besides being a life member of St. Andrews Royal Arch Chapter and DeMolay Commandery, Knights Templar.

Mr. Alden married April 21, 1856, Harriet J., daughter of Elijah Hadley, of Charlestown, Massachusetts, who survives him, together with two sons—Adelbert Henry, already mentioned, and George Edwin. For many years Mr. Alden resided in Cambridge, but latterly his summer residence was at Wellesley, where he owned what was formerly the Baker estate, containing 850 acres. He accumulated many relics of historic interest, including the carriage in which Washington rode on his visit to Boston, and the coach presented to Daniel Webster. The winter months the family spent at the Hotel Vendome in Boston.

* * *

FUNERAL services were held at Arlington Street Church, Boston, at 12.30 P. M., on October 14, and were largely attended by the former business associates of Mr. Alden, by representatives of many associations and societies with which he had been identified, and by the public generally. The ushers were employes of Mr. Alden's firm—J. Frank Dunbar, G. Edward Habich, R. L. Chipman, F. L. Moses, Harold W. French, and F. G. Phillips, all of Boston—and Robert B. Baird, of New York, who formerly was in the employ of the firm. Daniel B. Stedman was the head usher. The services were conducted by the minister of this church, the Rev. Paul Revere Frothingham. The music was rendered by Mr. Lewis S. Thompson, organist of the church, and several hymns were sung by a quartet. The following named acted as honorary pall bearers: Congressman J. J. Myers, ex-Congressman L. D. Apsley, president of the New England Rubber Club; Robert D. Evans, Henry C. Morse, George H. Hood, Henry M. Rogers, and Arthur W. Stedman (a partner of Mr. Alden); and ex-Governor Augustus O. Bourn, of Rhode Island. The burial, which was in the Alden family lot at Forrest Hills Cemetery, was private. Among those in attendance, including representatives of other associations mentioned in this paper, was a delegation from the Rubber Druggists' Sundries Association.

TRIBUTE OF THE NEW ENGLAND RUBBER CLUB.

At a special meeting of the executive committee of the New England Rubber Club, in Boston, on October 12, to take action on the death of Mr. Alden, the following resolutions were adopted:

WHEREAS, Our Honorary Vice President, counsellor, and friend, George Adelbert Alden, has been stricken by death and removed from our midst, we, the executive committee of the New England Rubber Club, in recognition of our great loss, record the following resolutions:

Resolved: That although the deceased was ripe in years and had accomplished more than falls to the lot of most men, his youthful spirit, energy, and sympathetic interest in all that pertains to our industry kept him before us as one always young and active, and we mourn him as one to whom death came most untimely. For fifty years a notable figure in the rubber trade, of old Puritan stock, in every sense a founder of his own fortunes; capable, forceful, true, the soul of courtesy; full of kindness and good fellowship, his name will ever be held by us in loving remembrance. To the business community at large has come a great bereavement in the passing of this honored manufacturer, merchant, banker, and citizen; nor may his place in the community be filled.

Resolved: That we extend to his family and to his business associates our deep and sincere sympathy.

Resolved: That these resolutions be spread upon the records of the Club, and copies engrossed and presented to his family.

L. D. APSLEY, President,
HENRY C. PEARSON, Secretary,
GEORGE P. WHITMORE, Treasurer.
E. E. WADSBROOK, Assistant Secretary.

The executive committee of the Club, as a further mark of respect to its late honorary vice president, attended in a body the funeral services at the Arlington Street Church.

ANNOUNCEMENT BY THE FIRM.

IT is with deep regret that we announce the death on this day of our respected senior partner, Mr. George A. Alden.

Out of respect to his memory our offices will be closed on Friday, the fourteenth instant, the day of the funeral.

Under the terms of the copartnership Mr. Alden's interest remains in the firm, and the business will be continued by the surviving partners, and with the same responsibility as heretofore. GEO. A. ALDEN & CO.
Boston, October 11, 1904.

OBITUARY NOTES.

CHARLES MORTON HAUTHAWAY, who died at his home in Brockton, Massachusetts, on September 29, was born in Plymouth, in that state, September 17, 1839. After serving in the civil war, he joined his father, the late C. L. Hawthaway, in the manufacture of rubber cements and shoe blackings, in which business he displayed great ability, and aided in making the house the largest in its line. A brother of the deceased, E. M. Hawthaway, was also admitted to the business, which is now carried on in Boston under the style of C. L. Hawthaway & Sons, Incorporated, with the surviving brother as the senior member. About 15 years ago the subject of this sketch retired from business and was succeeded by his son, Frank M. Hawthaway, who is now treasurer of the house. Mr. Hawthaway was a member of the Grand Army of the Republic and the Commercial Club of Brockton. Besides the son above mentioned, he is survived by a widow.

CHARLES Y. YEATON, who died in New York on September 29, in his sixty-ninth year, was a native of Portsmouth, New Hampshire, and descended from an old New England family. He is mentioned as having come to New York in the early fifties, when he was employed by Horace H. Day, the rubber manufacturer. Later he patented several inventions—including, it is said, the first type-writer machine ever offered for sale—and became wealthy, but died poor.

THE INDIA-RUBBER TRADE IN GREAT BRITAIN.

By Our Regular Correspondent.

NATURALLY, with the lapsing of the Welch patent and the forthcoming lapse of the Bartlett patent, the present is a busy and somewhat exciting time in the tire world. It is too soon yet to gage the probable fall in prices, though, to hear some motorists talk, one would think that raw rubber could be bought for a mere song. "It is our turn now; we have paid through the nose long enough," said a motorist to me the other day, but I am afraid that the lapse of the patents will not, after all, benefit them to the extent they seem to anticipate. I hear Moseley's new motor tire well spoken of; this is quite distinct from the red Seddon tire, made solely by this firm. The arrangement between Michelin et Cie. and the North British Rubber Co., Limited, has now naturally terminated, and, as has been already announced, Michelin's are about to manufacture in Great Britain—that is if the proposed new company comes to maturity. The North British are now going ahead with their "Clincher" tire with wired edges, so there is plenty of keen competition to be expected. It appears that the continuous tire litigation which has characterized the progress of the Dunlop company, is not yet at an end, as actions which were entered before the long vacation will still be heard. Though the rubber in motor tires may be considered to have attained as near perfection as can reasonably be expected, there seems to be room yet for improvement in the canvas; I refer especially to making it rot-proof. Of course the Palmer cord tire is an effort in this direction, but I am informed that in the case of a puncture with this tire the car must be stopped at once, otherwise it (the tire) will be altogether ruined. With such tires as the Continental, the journey can be finished after the occurrence of a puncture without the damage becoming more than local. In an article in the *Field* on the tire position, it is stated that most bursts of covers arise through the friction among the threads of the canvas insertion wearing them away, or through wet penetrating a cut and rotting the lining. Of course, even if the textile material is made quite rot-proof, this is no preventive of the bad effects of friction, and theoretically one would expect the principle involved in the Palmer cord tire to prove satisfactory in obviating both defects. It should not be long before the matter is placed beyond all doubt.

THIS law, which comes into operation at the New Year, promises to do away with some of the incongruities which have too long been associated with our patent laws. A search as regards novelty is to be made, and though the patent will not be denied if there is any doubt in the matter, yet any one taking one out that appears to have been anticipated, will do so with his eyes open. The idea is to get as near as possible to what has so long obtained in Germany and America. At the present time, if a man has a patent to dispose of he is asked at once if he has the German and American, as being the only ones thought of any value as far as real novelty is concerned. It will be interesting to watch the effect of the new law upon the rubber substitute or rubber devulcanizer inventor. There really does not seem to be any material, organic or inorganic, which has not been appropriated by some one for a rubber substitute. It is noticeable that the bulk of the specifications relating thereto end with the following expression or one closely identical, "the

substitute may be used as a proofing material or for the purpose of insulation." It would be interesting to know in how many cases hypothesis has merged into fact. Even supposing there were nothing palpably suspicious about the new body as revealed by perusal of the specification, there is always a great difficulty to be surmounted in getting the rubber manufacturer to take it up. "Will you guarantee me for any loss I may incur in using your substitute?" he asks the inventor, and the latter, despite his expressed confidence in the material, usually answers with a prompt negative, negotiations thus coming to a full stop. One can quite understand the attitude of the rubber manufacturer, especially as among the men who are attracted to the patent substitute business one so rarely finds any one with even a rudimentary knowledge of the rubber manufacture. With regard to the devulcanization of rubber, only the other day I saw that a patent had been granted for the use of caustic soda; it really does seem quite absurd the way the alkalies are continually being trotted out as if there was any novelty in their application to this purpose.

AT the recent conference of the Institute of British Carriage Manufacturers the president, Mr. W. H. Hamshaw, spoke in somewhat gloomy tones of the inroads made by American carriages on our Colonial business. As far as England was concerned it was in wheels more particularly that America had ousted the home manufacturer. I am not particularly interested myself in the Institute of Carriage Manufacturers, but the wheel question has more than once attracted my attention in connection with the cab tire trade. It is customary for works controlling the sale of special tires to sell the wheel as a whole, and I find that the bulk of the wheels thus made come to England from America in parts ready to be put together. There is no joining to be done; the aid of the blacksmith, or perhaps I ought to say the wheelwright, alone is required. I suppose that two prominent reasons for American supremacy in this manufacture are cheap timber and the use of labor saving machinery whereby large quantities of pieces of standard pattern are rapidly turned out.

IN an editorial under this heading the *India-Rubber Journal* makes some remarks which are very much to the point generally, and more particularly with regard to the individual who has a secret process for extracting rubber from certain herbage growing in the East Indies. Like the electric sugar swindle of a few years ago, this was a secret process, and the rubber could only be obtained by the "inventor" when interested persons were not looking. It is more than three years since I investigated this matter as far as I was allowed to go, and I had no hesitation in saying that the samples of rubber shown had no connection whatever with the vegetation or the process. The inventors answer to such condemnatory reports is of a personal nature and he assures his prospective patrons who know nothing of rubber that the difficulties in the way of rubber analysis preclude the independent investigator from giving a correct report. I hardly thought that anything more would be heard of the process and have been surprised to read in the journal quoted above that two other firms have recently parted with sums of money in connection with it. I trust that they are city company promoters and not rubber manufacturers; with regard

THE
TIRE
TRADE.THE
CARRIAGE
MANUFACTURE.ARTIFICIAL
RUBBER.THE NEW
PATENT LAW.

to the former class there is too much eagerness to get hold of a process so as to resell it to the public and this without too great anxiety to thoroughly probe its merits. When credulity in this class meets with a rebuff there is no particular call for sympathy. It is hardly conceivable that any rubber manufacturer can have parted with the sums of money mentioned in the *Journal* but whatever the status of those who have rendered financial assistance it is certainly quite time that the game was stopped and the publicity given to the matter at this juncture is fully warranted.

QUITE suddenly the gloom which has now for so lengthy a period pervaded Lancashire has been dispelled, and there is

THE
COTTON
TRADE.

little doubt that we are about to witness a great revival in the trade. The mills which have for so long been on short time will very shortly revert to full time, with the consequence of inducing a busier state of affairs among the various industries which are closely dependent on the fortunes of the cotton trade. Already the shares of many textile concerns have come into demand at the low prices at which they have stood for so long, and substantial rises in market value have occurred in the course of a few days. No doubt this sort of speculation will be overdone and a set-back will occur, but this has little to do with genuine business, which, to judge from informants of reliability, is in if not for a brilliant at any rate for a good time. This, of course, means greater activity for the mill furnisher, among whose goods those of rubber take a prominent position, and that the outlook is a much more cheerful one than I have been able to prognosticate for a considerable time back.

EXACTLY how far Balata enters into the composition of Gutta-percha goods is a matter on which those who are in the

THE POSITION
OF GUTTA-PERCHA.

best position to give information maintain a discreet silence. It may be only a coincidence that the raw Balata and Gutta trades exhibit a depression at the same time. No doubt the dullness in the ocean cable business has much more to do with the decreased demand for Gutta than has the rubber golf ball, though the influence of the latter on the situation is by no means negligible. The new cable from Denmark to Iceland, though of great importance to the Danish island, is not of sufficient length to give much of a fillip to a depressed industry.

A PACKING which has come into increased favor of late is "Klingerit," sold by Richard Klinger & Co., 66, Fenchurch street, London, E.C. It is a leathery looking compound which I understand has no rubber in it, though I cannot speak from personal knowledge.

NOTES ON
PACKINGS.

The inventor is an Austrian, known more particularly in connection with an improved water gage for steam boilers, and it was in connection with the packing required for this that the experiments resulting in "Klingerit" were made. As it does not decay in use, it can be used several times, and this appears to carry weight with engineers, though I should think that from the manufacturers' point of view an everlasting article is not altogether desirable. Another packing, which is stated by engineers to give much greater satisfaction than vulcanized rubber for high pressure steam joints, is "Woodite." This material was brought out by Captain Wood over 20 years ago, and was supposed to be composed in part of whalebone. Whether this was so or not it certainly contained a good deal of India-rubber and must be considered as a rubber packing. I presume that the patent, if there ever was one, must have lapsed by this time, and that the present manufacturers depend on the trade mark. There are competitors, it may be mentioned, who offer material the same as "Woodite," but do not invoice it under this name. With regard to "Dermatine" one hears its praise mostly sung

by engineers engaged in hydraulic work, where its use has done away with the annoyances caused by the defection of leather fittings. From what I hear, "Dermatine" has the field pretty much to itself in this line, and no doubt in others with which I am not familiar, but with regard to steam packings it has competition to meet.

THIS firm of rubber machinery engineers have recently made additions to their works at Castleton, near Manchester, and have also opened a branch office at 505 and 507, Corn Exchange buildings, Manchester, under the management of Mr. G. H. Park.

DAVID BRIDGE
& CO.

IN a recent British Foreign office publication attention is drawn to the great increase in the Italian imports of raw India-rubber and Gutta-percha. As I have not heard of the founding of any new factories it is a safe assumption that the business of Pirelli & Co., of Milan, is still showing expansion. The report

THE
ITALIAN
TRADE.

mentions that there are still a number of gutta and rubber articles not yet produced in Italy, and I presume that the import tax on such articles is kept a light one. Some years ago, before tires were made in the country, the British manufacturers did a good trade, but a heavy import tax, subsequently levied, practically put a stop to the business. Elastic thread is not yet being made in Italy, a positive statement to the contrary being due to a misapprehension. A rubber house in Milan does a large trade in the article, but it is all of foreign origin. Though not exactly coming under the above headline, I may call attention to the difficulty in finding from commercial directories what are really rubber factories and what are merely houses employing rubber in some form or other in their manufactures. For instance I don't think that a factory engaged in weaving rubber thread with textiles should be entered in a list of rubber works. But, after all, I suppose, the compilers of trade handbooks are largely in the hands of their subscribers, and is at the doors of the latter that any complaints as to ambiguity of description should be laid.

BRAZILIAN RUBBER INTERESTS.

THE urgent need of some methodical supervision of the channel of the river Acre, in order to render its navigation possible throughout the year, with a view to benefiting the rubber trade in that region, was pointed out by a contributor to THE INDIA RUBBER WORLD of October 1 (page 18). In this connection a recent report from Brazil is of interest, to the effect that two engineers, Srs. Raymundo Pereira da Silva and Gentil Norberto, had presented a proposal for removing the obstruction of the river Purus between the point known as Cachoeira and the mouth of the river Acre, a distance of 600 kilometers, so as to allow free navigation all the year round, also the different rapids on the Acre itself as far as Cachoeira do Riozinho. In return, they ask for a right to levy toll on all rubber passing the Cachoeira do Purus at the rate of 85 reis per kilo, and 20 reis on all other descending goods and 45 on ascending; the concession to last for 45 years. With exchange at 12 pence per milreis, the rate on rubber mentioned would equal 85 shillings, or \$20.68¼ per metric ton.

By a law of June 12, the congress of the state of Maranhão, Brazil, has exempted from export duty corn, manioc flour, and India-rubber of all grades, whenever these articles are intended for foreign consumption. The rubber trade has become of considerable importance since the discovery of a large number of productive rubber trees in the forests of the interior, in the direction of Imperatriz, Grajahu, Barrada Corda, and Riachao.

THE INDIA-RUBBER INDUSTRY IN SWEDEN AND NORWAY.

By Our British Correspondent.

THE India-rubber manufacture in Sweden and Norway is quite a modern one. Although the size of the factories will not bear comparison with those of Great Britain, France, or Germany, yet the output of rubber goods has already attained considerable proportions and, looked at from the point of view of the somewhat scanty population of the countries, the progress already attained must be considered as very satisfactory. Of course this feeling of satisfaction may not be universal; it is more than probable that other European rubber manufacturers who have found their erstwhile exports to Scandinavia show a marked decline may only see cause for grumbling in the altered condition of affairs. Be this as it may, however, the strides that have been made are matters of fact, and as it is the object of this article to bear testimony to the existing state of affairs, there is no need to occupy space by speculations as to how others are affected. To a greater extent, perhaps, than is found in other countries, the Scandinavian works are managed by those whose experience has been gained abroad. This is only natural in the case of a country going into a new line of business, and it undoubtedly has advantages in that the directorate gets into touch with up-to-date practice elsewhere. From the point of view of the journalist thirsty for information this cosmopolitanism is of course a great advantage, and those who have not had the time or the mental energy to master the Scandinavian tongues can rely on being able to converse in English, French, or German, and so get out of an *impasse*. Of course, facility with the better known tongues may not help the visitor to the country in his search for the works. I had much vexation of spirit before finally arriving at a certain *galoger-fabrik*. After having been conducted by kindly disposed persons to various boot shops in the town in which I understood the factory was located, I began to despair of getting my mission fulfilled. After a time, however, I discovered a cabman who knew the place, which proved to be more than five miles away in the country.

But to get to the more practical side of my communication without further delay, a commencement will be made with Norway, though, as will be seen by what follows, the sister country is by far the more important of the two as regards the output of rubber goods. The principal—one might really say the only—rubber factory in Norway is Aktieselskabet den Norske Galoge- og Gummivare-Fabrik, situated at Mjøndalen-Drammen, some 30 miles west of Christiania. By way of explanation to the uninitiated I may say that *Selskab*, in Norwegian, as also *Bolag*, in Swedish, corresponds to our "Limited" company, *et* being the definite article, which, in the Scandinavian tongues, is an affix. This works was founded in 1897, the main object, as the name indicates, being the production of rubber boots and shoes. The capital is 400,000 *kroner*.* The *disponente*, or general manager, is Mr. Aug. Fladmark, while the works management is in the hands of Mr. G. M. Hassel, who has had considerable experience of the trade, both in America and England. In addition to galoshes, which are the mainstay of the works, considerable quantities of soles for lawn tennis shoes are made. This pastime has now a considerable vogue in Scandinavia, though the name is not particularly appropriate, as the courts are nearly always of the asphalt or

gravel variety. This, of course, is all on the side of the trade, as shoes wear out much sooner on such courts than on grass lawns. There is the less need to go into details regarding this firm, as a special article referring to the works has been already published in THE INDIA RUBBER WORLD [September 1, 1899—page 355.]

The only other rubber factory in Norway is the Stavanger Gummivare-Fabrik. This is a small concern, making fruit jar rings, engine packings, and sundry mechanical goods. The Aktieselskabet den Norske Remfabrik, of Christiania, manufactures Balata and leather belting; with which reference we may now pass on to Sweden.

Here we find five factories, situated respectively at Helsingborg, Malmö, Trelleborg, Viskafors, and Gislaved; some particulars concerning each of these, as far as they have been furnished by the respective directorates, will now be given.

The Helsingborg Gummi-Fabrik Aktiebolaget was commenced as a private concern in 1890, but in the following year was made into a limited company, including the originators, Konsul P. Olsson and J. Dunker. The capital was raised to 151,000 *kroner*, and not long afterwards to 1,500,000 *kroner*, the works in late years having been considerably extended. They are situated in the outskirts of the town, and command a good view of the Danish coast, the sound being at this point only 2½ miles wide. The general manager is Mr. Henry Dunker, a name which might lead one to suppose him of English nationality, whereas he is a genuine Swede. Six hundred work people are employed, 5000 pairs of galoshes being turned out per day, having a yearly value of 250,000 *kroner*. The engines have an effective horse-power of 450. Though the galosh business is the principal one, the company also make mechanicals, such as railway vacuum hose; also, cycle tires, tennis balls, and painted playing balls. Statistics indicate that of a total export of galoshes in 1902 from Sweden of 289,000 kilograms, 166,000 kilograms came from the Helsingborg works. The Swedish exports go to Norway, Denmark, Germany, France, Switzerland, Austria-Hungary, and the Balkan states. The imports of raw rubber into Sweden in 1902 amounted to 300,000 kilograms, of which 193,000 kilos went to the Helsingborg factory, a fact which speaks for itself with regard to the status of the firm in the Swedish rubber world.

We turn now to Aktiebolaget "Velox" Gummi-Fabrik, at Trelleborg, a small town in the extreme southeast of Sweden. This company was formed in 1897 with a share capital of 300,000 *kroner*. The managing director is Johan Kock and the manager Albert Holmquist. The number of hands employed is about 100, though in the busy part of the tire season this number has to be considerably augmented. The tire trade has declined somewhat of late years from its former importance, and the company has paid increasing attention to mechanical goods of all kinds. A specialty is the covering of the large rollers used in paper mills, and it is understood that they have been successful in securing the bulk of this trade, which is an increasing one in Scandinavia, many of the mills which formerly exported all their wood pulp now making it or at least some of it into paper on the spot. At a large paper mill which I visited in Norway the machine was supplied by Messrs. Bertram's, Limited, of Edinburgh, but the rubber rollers were not of British origin, I understand. In proportion to its population Sweden

* One *kroner*=26.8 cents.

has, I believe, a greater mileage of railway than any other European country, and the consequent demand for certain rubber goods is largely met by the Trelleborg company. I did a good deal of traveling by rail north of Stockholm, and only saw two names stamped on the vacuum brake hose—those of Trelleborg and Helsingborg, the former name occurring much more frequently than the latter. There may, of course, have been hose in use derived from other sources. I can only testify to the fact that I did not come across any. The nervous traveler, by the way, might wish that continuous brakes were compulsory on passenger trains. They are always there, certainly, but when, as is often the case even with the so-called express train, trucks of wood or other merchandise are added to the train, the continuous brake system lapses and the passenger coaches are boarded by brake boys who work the hand brake on the inclines. This is somewhat of a divergence from my strict topic of the Trelleborg works, though it is not altogether without bearing upon its railway hose department. From 1900 to 1903 the company had an agreement with the Dunlop Pneumatic Tyre Co., Limited (Continental), to manufacture all original Dunlop tires sold in Scandinavia. It may be mentioned in conclusion that the works manager and foremen are Englishmen, and that the company has offices in Stockholm and Gothenburg.

I now pass on to Svenska Gummi-Fabriks Aktiebolaget, of Gislaved, a small town in the region north of Gothenburg. There is a strong American flavor about this factory, as it was built in 1893 by the present manager, Mr. William Gislöw, formerly employed by the Boston Rubber Shoe Co. and the Good-year's India Rubber Glove Manufacturing Co. It may be mentioned, by the way, that Mr. Gislöw also built the Helsingborg factory, in 1891. Until the Trelleborg firm entered into competition in 1899 the firm under notice was the only one in Sweden making mechanical rubber goods, which are now, as formerly, the main product. The first premises proving too small, a new mill was built in 1898, so as to enable the rubber shoe branch to be taken up. In June, 1900, their new premises were entirely destroyed by fire, but were rebuilt in the following year, and work is again in full swing. Rubber shoes, cycle tires, and balls are made, in addition to mechanical goods for railway and admiralty and general factory purposes. Much of the rubber machinery has been made in America, the Farrel Foundry and Machine Co., being, I understand the principal supplier. As a change from the other works and as being more in accordance with the traditions and practice of Scandinavia this factory is run by water power; three turbines are in use developing 450 HP. The use of coal is thus reduced to the minimum required for raising steam for vulcan pans, etc. The floor space of the factory I may mention amounts to about 45,000 square feet.

The last two works to which I have to refer can only be treated summarily, as I am not in possession of any detailed information. The first of these is Skandinaviska Gummi Aktiebolaget Svanholen, of Viskafors, a small town lying some distance northeast of Gothenburg. The factory was founded in 1890 and has a capital of 370,000 *kroner*. The general manager is Hjalmar Hallin, and the main article produced is the galosh.

The other works, which is also the newest in Sweden, is known as Svensk-Engelska Gummi-Fabrik Aktiebolaget. It was formed in 1898 with a combined Swedish and English capital of 400,000 *kroner*. The factory is situated in the outskirts of the large town Malmö, on the south coast, on the through route from Copenhagen to Stockholm.

From what I gathered in conversation it would rather seem that the recent multiplication of rubber shoe factories, and in-

deed mechanical rubber factories, has produced a competition in the home markets which is too keen for profitable business. It was, of course, easy enough by means of duties to ward off the foreign attack, but now those who were first established find their business cut into by new comers. It is suggested that all the elements for a satisfactory combination in the trade exist, the principal element, of course, being the limited number of factories. The Norwegian and Swede, it appears, can now, on account of the competition, purchase a better class article—I am referring more particularly to galoshes—for a certain sum of money than is the case in any other country, and the manufacturers, therefore, who do not lay claim to altruistic motives, are inclined to grumble at the state of affairs.

Without having the requisite degree of knowledge to enable me to comment usefully on the plaint which I have voiced, I can yet understand that in the case of sparsely populated countries such as Sweden and Norway, the competition arising from five rubber shoe factories may easily become somewhat disastrous from a dividend-paying standpoint. Evidently the business done by the firms first established must have been satisfactory, otherwise new comers would not have been attracted to the scene. It has been mentioned elsewhere that the Germans intend to raise their tariff against the Scandinavian rubber shoe factories, so things do not altogether look too bright for the future. One sees advertisements of Russian galoshes at stations up and down the country, but the only public advertisement of the sort referring to Swedish firms which caught my eye was—

"Malmö galoscher starka frau latta eleganta billiga"

—which I take to mean strength, combined with lightness, at moderate prices. So much for the Scandinavian rubber trade, the study of which in the course of a holiday tour could, of course, only be superficial. The pages of this Journal, which, though American in origin, is thoroughly cosmopolitan in its aims and trade interests, will be open to Scandinavians who may wish to amplify or criticise the remarks of the present writer.

* * *

EDITORIAL NOTE.—The following statistical details, compiled by THE INDIA RUBBER WORLD from various official sources, may prove of interest as supplementing the foregoing correspondence:

AMERICAN EXPORTS OF RUBBER GOODS TO SWEDEN AND NORWAY.

	1899-00.	1900-01.	1901-02.	1902-03.
Belting, packing, and hose	\$ 3,456	\$ 7,829	\$ 4,134	\$ 5,512
Boots and shoes	1,132	637	7,931	5,183
All other	9,806	25,266	7,729	13,008
Total	\$14,394	\$33,792	\$19,794	\$24,633

BRITISH RUBBER GOODS EXPORTS TO SWEDEN AND NORWAY.

	1901.	1902.	1903.
a Boots and shoes	£11,165	£ 9,711	£ 9,945
b Other sorts	32,441	32,692	32,988
Total	£43,606	£42,403	£32,933

a To Norway alone.

b Not including Waterproofed Apparel.

GERMAN RUBBER GOODS EXPORTS TO SWEDEN.

[Weights in Kilograms.]

	1901.	1902.	1903.
Rubber threads and sheets	17,300	35,000	31,100
Elastic tissues	145,200	135,300	146,500
Hard rubber goods	41,500	43,000	50,600
Fabrics and rubber—including tires	16,900	17,500	24,200
Hose (mechanical)	14,100	15,700	28,500

GERMAN IMPORTS FROM SWEDEN.

	1901.	1902.	1903.
Boots and shoes	51,000 kilos	44,700	28,400

Corresponding details for Norway are not available from Germany.

INSULATING MATERIALS IN HIGH TENSION CABLES.*

TWO insulating materials are now principally competing in the field of high tension cables—vulcanized rubber and paper impregnated with rosin and oil mixtures.

Paper insulation has made great progress in the last few years. The utility of using good manila paper, laid on in thin and regular layers, without wrinkles and crumpling, has been recognized, and also the utility of having it properly desiccated, at a moderate temperature, in a vacuum, and impregnated with a compound of rosin, or wax, or asphalt, with mineral, or castor, or linseed, or some other oil, that does not become brittle or pulverize with age. But rubber also has made progress; and if some feared formerly that it would decay with age, it is now certain that first class rubber cables, well vulcanized, and removed from the influence of brush discharges in the air, or not alternately dry and wet, will last indefinitely.

Rubber has a dielectric strength much higher than impregnated paper. Testing good rubber cables in such lengths as to include the inevitable irregularities of manufacture, with tensions progressively increasing and subjected to dielectric strain at least one hour, we can easily obtain for the rubber a dielectric strength of 12 to 15 kilovolts per millimeter. Paper in the same conditions would only stand 8 to 10 kilovolts per millimeter. These numbers represent as good an average as we can reach in normal manufacturing; it is not rare to find 20 to 30 per cent. more, or even higher percentages, but we cannot reckon upon these. The higher dielectric strength of rubber brings us to the conclusion that the use of rubber for very high tension will extend more and more.

* * *

A CAUSE of inferiority of the rubber is the lesser homogeneity of its products. It is not uncommon to find that two cables, manufactured in the same manner, with the same quality of rubber, afford a very different resistance to perforation—a difference, say, of 30 to 40 or 50 per cent. Paper cables are more homogeneous. The figures relative to dielectric strength given above are the result of a great number of tests made by the author on cables of various makers. They do not take account of some exceptionally high strengths; I found some pieces of rubber cable to withstand 20 to 25 kilovolts per millimeter. The elasticity of rubber gives it a great superiority over paper. A paper cable with large thickness of paper can not be easily bent, especially in cold weather, owing to cracking; on the other hand, the manufacture of concentric, or stranded, multiple core cables is simpler in the case of paper cables, for the insulating material can be uniformly distributed in the interspaces among the conductors, which remain buried in the insulator, which is not possible with rubber.

The great success of paper cables is a consequence of their lower price. But very high tensions require such a greater thickness of paper, that the cost of the paper added to the extra price for the larger quantity of lead, steel, tape, etc., permits the rubber to win in the competition.

The problem of manufacturing high tension cables would be simpler if the gradient of the potential within the body of the

insulator was constant. Suppose a 38 square millimeter cable insulated to 14.5 millimeters outer diameter, and working at 25,000 volts. The layer near the copper supports a strain of 5000 volts per millimeter, while near the lead the stress is only 1200 volts per millimeter. Should the stress be constant throughout, each layer of 1 millimeter would support a strain of 2270 volts, and the cable would be much safer. We could then also diminish the thickness of the insulation to, say, 5 millimeters, letting every layer work at 5000 volts.

* * *

WITHOUT claiming to get an absolutely constant gradient, we can, therefore, try to have the potential better distributed along the radius of the insulation, and at the same time use in the proper place materials having greater dielectric strength, by making the insulating layers of different materials specially chosen. This method I studied and applied to the manufacture of high tension cables, as early as 1898. Such cables, consisting of conductors first insulated with several layers of rubber, on which were wound layers of paper or jute, were patented by Messrs. Pirelli & Co. [Milan, Italy], March, 1900. A cable of this kind was working at 25,000 volts, during the Paris exhibition of 1900.

The specific inductive capacity of paper cables varies from 3 to 4, according to the type of paper and mixture adopted. The inductive capacity of paper is about 2; that of rosin 2 to 3, according to its origin; and mixtures of rosin, oil, paraffin, ozokerite, and other materials, have a capacity of 3 to 4, or even more. For example, lubricating oil 55 parts, rosin 560, paraffin 224, ozokerite 160, has a standard inductive capacity of 3.6; oxydized linseed oil 90, rosin 370, Arkangel pitch 70, have 4.4; Arkangel pitch itself has 5.9; a mixture with Gallipot, instead of rosin—for example, Gallipot 600, Arkangel pitch 110 and linseed oil 130—has 4.8; a mixture of lubricating oil 9, rosin 52, black ozokerite 23, white ozokerite 16, has only 3.55.

It appears from these figures that it is possible to have a large range of inductive capacity with paper cables. But as they are impregnated in mass, the entire mass has the same standard inductive capacity unless we change the type of paper, by using, for example, paper loaded with some materials, as suggested very ingeniously by Mr. O'Gorman.

* * *

ON the contrary, it is easy to use different rubbers having varied standard inductive capacity, for rubber is put on in successive layers which can be quite different one from another, and which have no tendency to mingle together, either during or after manufacture. The cables I alluded to are manufactured with layers of various qualities of rubber in the inner part of the insulation; but as soon as the gradient of potential becomes so diminished as to allow the use of paper, the insulation is continued with paper, and after the paper with jute, if the gradient is sufficiently low to allow the use of jute. The rubber insulation is generally first vulcanized and the conductor tested in water, as usual, before adding the outer layers of paper and jute.

Pure vulcanized rubber has an inductive capacity something like three as an average; but it is very easy to "load" the rubber with large quantities of extraneous materials, which, without sensibly lessening its specific dielectric strength, augment the capacity very much. A rubber with 58 per cent. Pará, 2 per cent. sulphur, 26 per cent. talc and 14 per cent.

*The matter presented herewith consists of a series of paragraphs selected from an exhaustive paper presented at the International Electrical Congress, at St. Louis, by Signor Emmanuel Jona, chief electrician of the establishment of Pirelli & Co. (Milan), and a delegate to the congress from the Associazione Elettrotecnica Italiana. There is not space in these pages for all the data introduced by the author as the basis for his conclusions; but without these the paper, though incomplete, will not fail to be of interest, in connection with the relative merit of rubber and paper as insulating materials.—THE EDITOR.

oxide of zinc, has a dielectric strength comparable to that of pure vulcanized Pará (15 to 20 kilovolts per millimeter); and a specific inductive capacity of 4 to 4.2. A rubber with 64 per cent. Pará, 8 per cent. sulphur, 16 per cent. talc, 8 per cent. minium, 4 per cent. oxide of zinc has about the same dielectric strength as above mentioned, while its specific capacity reaches five. A rubber largely loaded with sulphur and talc—for example, Pará 100, talc 40, and sulphur 40, has a capacity as high as 6.10, with a dielectric strength of the same order of magnitude as before. A mixture of Pará 40, carbonate of lime 45, sulphur 5, has a standard inductive capacity of 4.6. Very large variations of capacity, accompanied by high dielectric strength, are obtained by loading rubber with more or less sulphur and golden sulphurate of antimony still remaining first-class rubber. Much larger capacities, 10 to 12, are to be obtained, of course, by using very large percentages of India-rubber substitutes, such as gypsum, lime, baryta, etc.; but we then arrive at inferior classes of rubber, which have not a dielectric strength to be compared with the above-mentioned combinations.

* * *

IT is very easy to manufacture rubber cables with layers disposed in the order of decreased specific capacity, from the center to the circumference. These cables will afford a more uniform gradient to an alternating current, and hence more safety, with equal thickness. By using paper on the rubber, as above explained, we concentrate the more costly rubber insulation in the inmost part of the cable, where its higher specific strength is actually utilized.

A sample of a single core cable made by this method for 50-kilovolt effective tension, between the copper and the outer sheathing, has the following specifications: Conductor, 19-wire strand, each wire 3.3 millimeters diameter; section of copper 162 square millimeters. The strand is put in a lead tube having 18 millimeters outer diameter. It is insulated with a first layer of rubber, 2.5 millimeters thick, having a specific inductive capacity of 6.1; then with a second and a third layer of rubber of respectively 2.3 and 4.5 millimeters thick and 4.2 standard inductive capacity. On the rubber there is a layer of impregnated paper 5.2 millimeters thick, having a standard inductive capacity of 4. The cable is then lead-covered. The total thickness of insulation is 14.5 millimeters.

At 50,000 volts, the maximum strain in the first layer of rubber is 4400 volts per millimeter; in the second layer it is 4450 volts, in the third 4150 and in the paper 3250 volts per millimeter. With a homogeneous dielectric, the maximum strain would be 5800 volts. This cable was tested for one hour at each of the following voltages: 35,000 effective volts, 40,000, 45,000, 50,000, 55,000, 60,000, 65,000, 70,000, 75,000, 80,000, 85,000, 90,000, 95,000, and four hours at 100,000 volts without perforation. After the 80,000 volts test, its temperature was a few degrees higher than that of the room; and after four hours at 100,000 volts, twenty degrees centigrade higher.

* * *

GUTTA-PERCHA possesses also very great dielectric strength, comparable to that of good rubber, 15 to 20 kilovolts per millimeter. It is not used for insulating cables for lighting or power purposes, because of its very high price, and also its especially low melting point. Such cables can easily reach a temperature which softens Gutta-percha. A possible application of Gutta-percha is for cables crossing lakes, rivers, and, generally speaking, for laying in cold water. It is then advisable to make a first layer of rubber insulation, on which Gutta-percha is laid so that the latter, being in contact with external cold water, can not heat very much. Many manufacturers do

not trust the impermeability of rubber cables, and this external coat of Gutta-percha, absolutely waterproof, adds its own dielectric strength to that of rubber and obviates the inconvenience of having a heavy lead pipe, as employed by the manufacturers to which I have alluded. It is often advisable in such cables to avoid splices, and for the sake of facility of transport and laying, they can be single cored, rather than three cored. I may add that single core cables for very high tensions, requiring generally a low current strength, can often be armored with steel wires; the steel wires can be separately wrapped with tarred manila, in order to lessen the section of the metal and increase the magnetic and electric resistance of the cross circuit. For example, a 2.5 millimeter steel wire wrapped to 5 or 6 millimeters with manila, may be used without any great inconvenience from hysteresis or self-induction; the drop of pressure by self-induction can have in such cables no more importance than the drop by ohmic resistance.

* * *

I WOULD like to add something on the properties of various insulating materials. These materials are influenced by Röntgen rays, which lessen their specific insulation and perhaps also their dielectric strength. But cables are not made to be submitted to such rays, although they often experience brush discharges and some other emanations, which may have similar influences. I should like to add that temperature lessens the resistance of the insulation very quickly, as expressed in megohms. A paper cable at 35° Centigrade shows but one-thirtieth of the megohms it has at 15° Centigrade. But temperature has very little influence upon strength to resist breakdown. Palm oil melted at 50° Centigrade gives a strength corresponding to that of the best oils for transformers at ordinary temperature. I have drawn experimental curves of dielectric strength of melted paraffin at 55° Centigrade and at 85° Centigrade from 10 up to 160 kilovolts; they are very similar. This allows us to conclude that in this respect cables cannot differ very much. I have tested two reels of paper cables, each cut in five pieces, immersed in baths at zero, 15°, 35°, 70°, and 100° Centigrade. The dielectric strength did not lessen by raising temperature, perhaps at zero it was less than at 70°. I noted in some oils something similar, but dielectric strength is too complex a phenomenon to be discussed on small experimental differences. Of course, that cannot justify us in working at high tensions with cables too highly heated, for it is probable that heat would facilitate a chemical decay of the dielectric; but a momentary elevation of temperature is not so much to be feared as one would think at first sight.

THE WEARING OF RUBBER COLLARS.

THE New York Press says that Mr. Duke, "worth millions, all of which he made out of tobacco, is not the only person in the world who wears rubber collars. They are becoming popular with schoolboys on account of their economy. Seven linen collars a week cost to launder fourteen cents. A rubber collar, price thirty-five cents, can be cleaned without trouble every morning, or a dozen times a day, and will last three months. As an experiment, I tried one of these collars on a fishing trip and it was not a success. Being impervious, it caused the neck to sweat too freely and kept the neckband of the shirt wringing wet. Others have had the same experience. For ten years the manufacturers have moved heaven and earth in vain to induce the trade to handle these rubber collars. Their business is confined to two small shops in this city. Perhaps if they would judiciously advertise, something might be accomplished. They might build up a mail order business."

VULCANIZATION OF RUBBER BY ELECTRICITY.

ONE of the most interesting recent developments in the line of rubber manufacture is the Riddle process for the vulcanization of rubber by electric heat, generated either in press, vulcanizer, mold, support, or former. The inventor and patentee of the processes and machinery is Mr. Howard S. Riddle, for six years mechanical

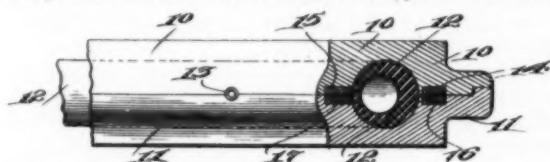


FIG. 1.—Mold for curing Single Tube Tires. Description: 10, 11, upper and lower halves of mold; 12, rubber tire; 13, valve stem; 14, 15, coils for magnetizing and heating upper half of mold; 16, 17, coils for magnetizing and heating lower half of molds.

engineer for The Diamond Rubber Co. (Akron, Ohio), and an expert both in mechanics and electricity. Patents have been secured by him in Great Britain, France, Germany, Belgium, Holland, Italy, Switzerland, Russia, Finland, Japan, Australia, Mexico, Canada, the United States, and some South American countries.

The inventions consist, broadly stated, in making use of an electric current, to close the parts of a mold, or the platens of a press, and also to heat electrically the molds or the platens and thus effect vulcanization.

The currents used are preferably the direct, for closing, and the alternating, for heating. While neither current is strong enough to be in the slightest degree dangerous, any degree of heat up to 400° F. is easily obtained, and may be controlled with absolute accuracy for any length of

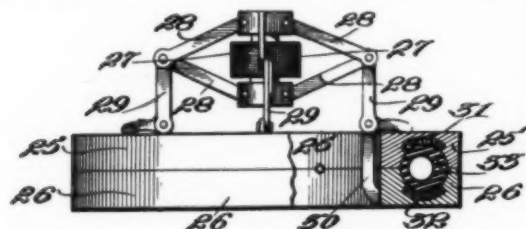


FIG. 3.—Closing Device for Molds or Presses. Description: 25, 26, tire mold; 27, electro-magnet or solenoid; 28, toggle levers; 29, bell crank levers; 30, pivotally fulcrumed arms; 31, 32, coils for heating; 33, tire.

time, while by the direct current the mold or press may be closed, and any pressure needed for rubber work be exerted and continued until the current is turned off.

The molds, platens, or formers—that is, the heating surfaces—must be made of a magnetizable metal, either soft steel or cast iron being the best. Soft metal molds such as are used in hard rubber work could not be magnetized and heated, although they could doubtless be used in a press or vulcanizer that was itself electrically heated.

That this process has an almost infinite number of applications in the manipulation of rubber is at once apparent. Those cited by the inventor relate chiefly to the closing of the mold and the curing of the rubber in molds for tires of the single tube and clincher variety, in curing hose by sending a current through the mandrel on which it is made, in closing the platens of a press for regular mold work, in heating the platens, and in closing the door of a vulcanizer and holding it tightly while the



FIG. 4.—Curing Hose. Description: 49, mandrel connected at ends for electric heating by direct current; 48, rubber covering to be vulcanized.

whole interior is electrically heated and vulcanization goes on. Of plans for heating mixing and calender rolls, of curing dry heat goods such as shoes, clothing, dress shields, etc., no specific mention is made, although they all come under the broad claims that are allowed.

No adaptation of the new process however, seems to fit the curing of dipped goods, and that seems to be the only exception as far as general lines go.

The electric heat is developed by placing magnet coils in recesses or grooves in the faces of the platens or molds, connecting with an alternating current, which establishes rapidly alternating magnetic fields with the attending hysteresis effects, and foucault

or eddy currents. The mold is closed by the magnetic attraction of its parts induced by an electric current passing through coils imbedded in the parts of the mold.

A magnetic press is also used to perform the work of the old hydraulic presses, and is operated by a solenoid—and a series of toggles and bell crank levers.

There are many obvious advantages to the new process. It does away with bolts and clamps for molds, steam chambers for presses and tubing machines, leaky valves, and new packing, and it is claimed that the actual cost of operation is about one-half of that of steam.

CONCESSIONS FOR "ALMEIDINA" GUM.

WHILE not much has been heard recently in regard to the grade of rubber known as "Almeidina," it appears that interest in it has not died out in the country of its production. The Portuguese *Diário do Governo* of September 24 contains a

royal decree authorizing the government to grant to Portuguese companies legally constituted, to Portuguese subjects, or to foreigners who undertake to establish Portuguese companies, concessions for the exploitation of the "Almeidina" rubber plant (*Euphorbia tirucalli*) in Angola, on certain conditions, the details of which we hope to present later.

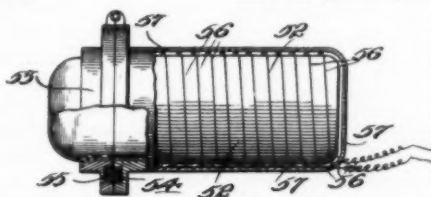


FIG. 5.—Description: 52, vulcanizer; 53, door; 54, 55, magnet coils for closing door; 56, coil for heating the vulcanizer; 57, protective casing.

THE ASTFALCK QUICK PRESS SYSTEM.

FROM Germany THE INDIA RUBBER WORLD has received a description of a "System for hydraulic presses for vulcanizing rubber goods," known as the Astfalck system, that is interesting. Allowing for the lack of illustrations, and for the difficulty that the translator had in comprehending technical terms, and eliminating descriptions of qualities that all of the best makes of presses have in common, there still remains much of value in the article, which follows:

"In order to avoid any disadvantageous sagging, these presses are provided with a number of plungers, are so constructed that no harmful warping can arise from the heating and cooling of the machine. To provide for the greatest possible uniformity of expansion in the upper and lower parts of the press, without detrimental action of the friction upon the dead weight, a compensating device has been added which consists essentially of two cast iron tubes or pipes connecting the nether press heads, these tubes being warmed and cooled in the same manner as the follower.

"Moreover the entablatures rest upon rollers so that the expansion and contraction of the press from heating and consequent cooling may proceed unhindered. After placing the material to be vulcanized upon the lower plate—to bring up the table to its effective working point against the upper frame head, economically and without loss of time—there are connected with the entablature so-called advance pressure cylinders, which elevate the entablature as quickly as is compatible with a good oversight of the work in hand. Besides, in this non working movement, which forms the greatest portion of the whole upward motion, there is only sufficient water used to raise the table and at the same time to overcome the resistance of easy friction and added speed; for, in consequence of a peculiar arrangement of valves, during this process the press cylinder proper is filled with the running water contained in a low standing tank, without the aid of any other mechanism. As soon as the material to be vulcanized is brought up to and in contact with the upper head of the press, any desired pressure may be obtained by the movement of a hand lever which operates the necessary valves and said pressure may be maintained in the press for any desired length of time. The vulcanizing having been accomplished, a short lever movement opens other valves, the pressure is released and the sinking of the entablature takes place rapidly without the use of water pressure. In the release by means of the valve motion an extremely rapid fall of the lower table is effected and at the same time an easy dislodgement of the vulcanized material is made possible.

"For all the movements of the press—viz.: The quickest upward non working motion, the real pressure work, and the most rapid return after work has been accomplished—only one short easily moved lever is necessary; and what is more, this motion of the lever is always in the direction of the press motion desired: up, for an upward movement, and down, for the downward movement, so that all chances of mistakes are eliminated.

"The qualities of the water saving device, 'System Astfalck' which are applied to these presses, permit not only of the quick motions above described but require withal so little water for pressure purposes that only a very small high pressure accumulator and a very small pump are sufficient to serve several such presses, which means small requirements of power from a power plant, not to mention light transmissions. Hence the operation of two hydraulic vulcanizing presses each having a pressure capacity of 675 tons, together with one press having a capacity of 350 tons gross pressure, working under normal con-

ditions—two complete operations for each press per hour—would call for only one small water accumulator of 20 to 30 liters contents and a small pressure pump of $\frac{1}{2}$ to $\frac{3}{4}$ HP.

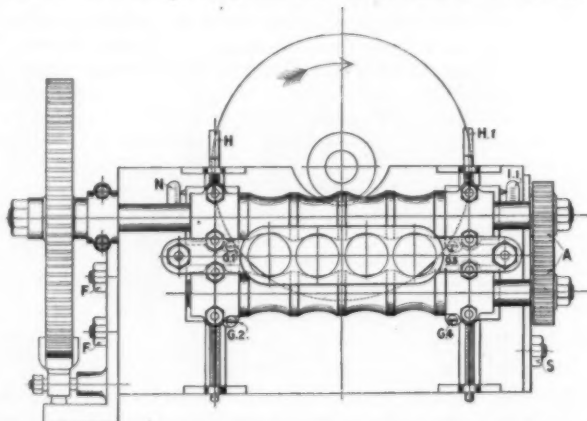
"For filling the pressure cylinder in its upward non working motion there is generally provided a small water-tank which is connected with the valves of the press by means of a pipe sufficient to afford rapid delivery and discharge. Since, however, the press pump obtains its supply from this tank, and the press cylinder discharges its spent water into it, the same water is used over and over again, whereby on the one hand, a longer life is guaranteed to all the working parts of the machine, and on the other hand the possibility of adding a lubricant to the water is at hand.

"The pressure pump is connected up with the accumulator in such a manner that the accumulator in its highest position automatically cuts off the water from the pump and when water is needed opens the supply, so that the pump does not have to wait at either end. Moreover, the pump is provided with a loose pulley so that it may be thrown out altogether when it is desired to hold the press for any length of time under pressure.

"By virtue of the above described devices the service or attention to the whole plant becomes a very simple matter, for the man in charge has nothing more to do than, with a lever, to initiate the desired motion of the warming table and all the rest follows automatically."

A NEW TYPE OF RING CUTTER.

A MACHINE that cuts 80,000 jar rings in a ten hour run is shown in the accompanying illustration. It is arranged to cut up tubing of varying diameters, the cutting knife making 15,000 revolutions a minute. To cut a tube of particular diameter there is a guide which is inserted in the machine in the following manner: The nuts *E, F, F¹* are first loosened and then the front iron guide and the back brass guide are then both removed from the machine, the latter by loosening the four screws *G¹, G², G³, G⁴*, and the two studs *H* and *H¹* to the left



and to the right, are screwed in until the index points for the two scales plates *I* and *I¹* indicate the proper number. When this is done the guides may be inserted and the nuts *E, F,* and *F¹* are screwed on, and then four tubes are inserted through the front guides and the scale which is found on the rear part is then adjusted for the thickness of the rings to be cut and the machine is then ready for operation. The adjustment of the rear scale is made in the following manner: The index hand is screwed to the zero point by means of the studs, then the machine is revolved by hand until the support has exactly reached its lowest position. The two screws are then loosened

and the scale is shoved up until the stop just touches the carrying lever, then the two screws are again fastened and the index hand placed opposite the number on the scale by means of the spindle; that is, the number which indicates the thickness of the rings to be cut. Special attention must also be called to the following points: First, that when screwing the studs *G*, the cog wheels *A* must be disconnected; second, that the cog wheels after being placed in mesh do not engage too hard; third, that both the index hands over the scales *I* are exactly adjusted to the same relative position. [Max Müller, Hanover-Hainholz, Germany.]

RUBBER AT A CARRIAGE SHOW.

IN connection with the fifteenth annual convention of the National Carriage Dealers' Protective Association, held at the Grand Central Palace, New York, October 10-15, there was held the eleventh annual exposition of vehicles and accessories. In this exhibition, spread over several floors of the great building, India-rubber was in evidence everywhere, but chiefly on the hundreds of finished vehicles on display, and in the shape of tires. Some of the carriage dealers seen stated that at least 90 per cent. of their orders to-day, whatever the type of vehicle, specify rubber tires. The exhibits made by the tire manufacturers were good, but seemed fewer in number than at some former conventions, which is probably due to the fact that the trade has not now so many novelties to exhibit as in earlier years, besides which there is a tendency among the rubber manufacturers, on account of the heavy cost of making displays, to comply less freely with invitations to place their goods on exhibition. The tire manufacturing companies making displays were the following:

The Diamond Rubber Co. (Akron, Ohio).—Solid pneumatic tires; especially solid tires of the "417" compound.

The Goodyear Tire and Rubber Co. (Akron, Ohio).—Solid and pneumatic tires, tire applying machinery, and a new wire drawing machine.

The Hartford Rubber Works Co. (Hartford, Connecticut).—Solid and pneumatic tires, and rubber prop blocks.

India Rubber Co. (New Brunswick, New Jersey).—Solid and pneumatic tires.

Morgan & Wright (Chicago, Illinois).—New three wire solid tire, standard solid and pneumatic tires, horseshoe pads, two types of tire applying machines, and a joint closing machine.

Milwaukee Rubber Works Co. (Cudahy, Wisconsin).—The Fawkes tire, and standard solid tires.

Pennsylvania Rubber Co. (Jeannette, Pennsylvania).—Solid and pneumatic tires.

The Sweet Tire and Rubber Co. (Batavia, New York).—Solid tires, and machine for applying them.

Voorhees Rubber Manufacturing Co. (Jersey City, New Jersey).—Solid tires.

Most of the solid tire manufacturers who are represented showed tire stock on reels in 250 feet and 500 feet, which practice seems to appeal strongly to the carriage tire trade at this time.

The Fairfield Rubber Co. (Fairfield, Connecticut) exhibited rubber carriage cloth; The L. C. Chase & Co. (Boston), carriage cloth and Chase leather; Vehicle Apron and Hood Co. (Columbus, Ohio), rubber storm fronts; The Fabrikoid Co. (Newburgh, New York), carriage cloth of "Fabrikoid."

RUBBER TIRE STOCK ON REELS.

TEN years ago the head of the leading carriage building firm in New York, though interested in a solid rubber tire patent and prepared to execute orders for rubber tired carriages, as-

sured a representative of THE INDIA RUBBER WORLD that rubber tires on vehicles could never come into wide use, for the reason that there were insuperable difficulties in the way of retaining such tires in their channels, and for this reason owners of carriages could not afford to use rubber tires very far from the factory. The idea was that the tires might require to be returned to the factory very often, and that only an expert could replace a tire which had slipped from its channel. This gentleman is no longer alive, but if he were he would see that it has become not only possible to put on rubber tires that will remain in place until worn out, but that all over the country there are shops, large and small, prepared not only to make repairs of rubber tires, but to make the original application of

them to wheels.

A carriage can be equipped with rubber tires to-day at Los Angeles, California, quite as well as at the Eastern factories which supply the material, and any repairs which may later be needed can be



500 FEET OF TIRE ON REEL.

made in the remotest town where any carriage trade exists as well as if the wheels were shipped to the factory where first equipped.

These lines are suggested by the growing practice of the manufacturers of solid rubber tires of putting up tire stock in lengths of several hundred feet, and shipping to carriage makers and repair men in the form indicated by the accompanying illustration from a recent catalogue of Morgan & Wright (Chicago). Besides being a great advantage to the user from the standpoint of economy, say this firm, this method enables workmen to handle tires more conveniently, thus saving time and labor. Wound neatly on a reel and placed in a wooden rack, tires take up much less room in the store or shop, which is an object of interest to those who are obliged to economize in space.

INDIA-RUBBER GOODS IN COMMERCE.

EXPORTS FROM THE UNITED STATES.

OFFICIAL statement of values of exports of manufactures of India-rubber and Gutta-percha, for the month of August, 1904, and for the first eight months of five calendar years:

MONTHS.	Belting, Packing, and Hose.	Boots and Shoes.	All other Rubber.	TOTAL.
August, 1904	\$ 66,306	\$179,264	\$ 217,992	\$ 463,562
January-July	504,666	472,128	1,382,582	2,359,376
Total	\$570,972	\$651,392	\$1,600,574	\$2,822,938
Total, 1903	568,797	507,897	1,655,396	2,732,090
Total, 1902	459,871	524,629	1,298,132	2,282,632
Total, 1901	348,917	394,397	1,203,086	1,996,310
Total, 1900	359,840	350,286	1,000,839	1,710,965

The number of pairs of rubber boots and shoes exported during eight months was 1,228,475, against 1,036,335 pairs for the first eight months last year and 1,124,463 pairs in 1902.

Exports of reclaimed rubber for eight months were valued at \$237,890; same months last year, \$287,561.

SIXTY YEARS IN THE RUBBER BUSINESS.

JOHAN DAVIS VERMEULE, rubber manufacturer, banker, and merchant, at the age of 82 years, is still in active business, strong and alert, and with a health flush on his cheek that a man thirty years younger might well be proud of. Mr. Vermeule was born in Plainfield, New Jersey, September 21, 1822. He is a descendant of Jan Cornelissen Vermeule, who was a prominent citizen of Flushing (Vlissingen), Zeeland, in the Netherlands, and a member of an old Holland family. It was his son Adrian who came to New York in 1699 to visit friends in Harlem. He liked the country and remained, and was town clerk and lecturer of the Dutch Reformed Church for eight years, after which he removed to Bergen, New Jersey. His son in turn became a large land holder and a member of the Provincial congress of New Jersey. Both he and his four sons were soldiers in the war of the Revolution. One of these sons, a grandfather of the subject of this sketch, was judge of the court of common pleas of Somerset county.

It will be seen, therefore, that Mr. Vermeule comes from the best Dutch and Revolutionary stock. In his boyhood he attended Morton's School at Middlebrook, New Jersey, until he was 18 years old, when he became clerk in a dry goods store in New Brunswick. Four years later, in 1844, there came the organization of Goodyear's India Rubber Glove Manufacturing Co., with which corporation he became connected. From the beginning he sustained an important relation to the company, and in time became the largest stockholder. In 1877 he was elected treasurer, and in 1882 president, which latter office he still holds. Under his management the business grew wonderfully; the little red mill at Naugatuck, Connecticut, was surrounded by great factory plants, and the fine goods that the company manufactured not only were firmly established on the market but found constantly increasing outlets. In the course of his experiences as a rubber manufacturer Mr. Vermeule gathered around him some of the best executive and manufacturing ability in the trade, and it is only necessary to cite the names of Van Vliet and Schaffer in this connection to receive a very general assent to this statement.

Mr. Vermeule has many interests outside of the rubber business. For example, he is president of the Holland Trust Co., vice president of the American Savings and Loan Association, and a director in several national banks. His pet project is, perhaps, the York Cliffs Improvement Co., at York Cliffs, Maine, where he has a magnificent summer home. This company own 400 acres of shore land, giving them two miles of ocean frontage which, through Mr. Vermeule's energy and foresight, has been laid out into parks, fine building sites, and in every way improved. He also built personally the Passaconaway Inn, a beautiful shore resort at the Cliffs. His own villa, by the way, is named "Klipansee," which means in ancient Dutch, "Land and sea." Mr. Vermeule married, in 1846, Mary



JOHN D. VERMEULE.

C. Kelley, a daughter of a prominent Philadelphia merchant. He is an enthusiastic member of the Holland Society, in New York; a patron of the Metropolitan Museum of Arts, and although not essentially a clubman, he is a member of the Reform, Manhattan, Riding, Commonwealth, and Merchants' Clubs. He spends his summers usually at York Cliffs, Maine, and his winters at his home on Forty-sixth street, near Fifth avenue, New York, where, as a lover of books and works of art, he has a most valuable library and many fine paintings.

In 1896 Mr. Vermeule entered the directory of the United States Rubber Co., the India Rubber Glove company having become merged in that corporation, and he has since continued a member of the board.

JAPANESE WATERPROOF GOODS.

SPURRED to economy by the mother of all invention, the Japanese have learned to utilize every strip of bark, wood, bud, and leaf of their trees and shrubs, and he would be considered a poor workman indeed who failed to realize the value of each tiny strip of forest product. The inventive or adaptive genius of the Japanese compares in some particular fields pretty favorably with our typical New England Yankee. Who other than a Japanese could have conceived such startling ideas in interior house construction? The walls are papered not such as we paper ours, with dazzling splashes of lithographed colors and flowers, but with oiled paper that sheds the rain and moisture, preserves a uniform dryness inside, and graduates the light from without so that it is never dark and gloomy inside, nor too bright for the tired eyes. They light their homes without the aid of glass windows, and in such a way that the eyes can find rest and ease without artificial shading or extra light.

A Japanese makes his oiled paper out of the bark of trees and shrubs. The wood itself is too precious for this work, but the bark is stripped off and converted into marvelous weaves of paper cloth. The fiber of the bamboo, reed grass, and other plants is also utilized in this way, paper cloth being made by hand which for many purposes is superior to our own rubber goods. Rubber is a scarce commodity in Japan, and rubber overcoats, shoes, and similar articles are almost unknown.

How the Japanese workmen succeed in producing such light, gossamer-like paper cloth that will serve all the functions of our heavy rubber goods is a mystery, and, furthermore, it is impossible for the uninitiated to comprehend how they do this out of the material at hand, and at a cost which places it within the hands of all. Oiled paper cloth is astonishingly cheap—cheaper than most grades of our cotton goods. Every one purchases it for one or more of a score of different purposes. It is sold everywhere, and used everywhere. An astonishing amount of bark must be used for manufacturing it.

A raincoat or cloak that can be thrown over the head to protect it thoroughly from a drenching storm can be purchased for less than twenty cents, and this can be used repeatedly for upward of six months or a year. It is so soft and pliable that it can be folded carefully and put away for future use. When again needed it will shake out without crease or wrinkle.

The Japanese truckmen and "rickshaw" coolies carry oiled paper blankets in their vehicles for emergency use. If a sudden storm should come up when perishable goods are being carried, they instantly bring forth their oiled paper cloth and spread it over the top. The rain is shed as though the goods were protected by rubber blankets. It is impossible to wet goods once covered or wrapped with the best quality of oiled paper cloth.—*The Evening Post, New York.*

NEW GOODS AND SPECIALTIES IN RUBBER.

DODS CROSS EXPANSION PISTON PACKING.

ENGINEERS long have sought, and rubber manufacturers have tried to produce, a cross expansion packing. Rubber cushions have been tried, wedge shaped pieces, and other designs, but often without satisfactory results. The packing here illustrated was first made and used by



FIG. 1.



FIG. 2.

Henry Dods, an engineer employed at the famous Comstock silver mine, in the absence of any other packing that would meet his special want.

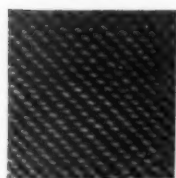


FIG. 3.



FIG. 4.

This packing is made of layers of duck and rubber placed at a diagonal from every side, and so arranged that an edge of duck faces every bearing. Dods obtained a patent on this packing, which patent has been acquired by the manufacturing company named below. The packing is claimed to have a greater cross expansion than any other; under pressure it will expand 100 per cent. In the illustrations Fig. 1 shows a piece of the Dods square packing under pressure showing an expansion of 100 per cent.; Fig. 2 shows a piece of square packing in general use, which, under the same pressure, expands only 30 per cent. Fig. 3 shows the Dods packing in cross section and Fig. 4 a regular packing in cross section. Fig. 5 illustrates the Dods packing in service. When placed around vibrating or bent rods, or in uneven stuffing boxes, it will hold steam, air, or liquids. Under pressure from the gland it will expand and fill every space, while maintaining a smooth surface against the rod, but without heating the rod. The packing is spiralized and lubricated, and put up in boxes, in 12-foot lengths. [Bowers Rubber Co., San Francisco, California.]

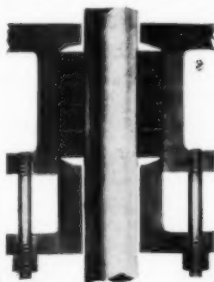


FIG. 5.

WATERPROOF LEATHER SHOES.

ONE of the large Brooklyn (New York) stores advertises that it controls the factory making a line of men's waterproof shoes, of which this description is furnished: "Made of kangaroo calfskin, with fine, soft, dongola tops, three heavy soles,

with rubber and oil-silk vamp and sole linings. All seams double stitched and reinforced, so as to insure increased wear." The shoes retail at \$1.98.

THE AUTO TIRE PROTECTOR.

THIS illustration relates to a device, a patent on which has been applied for, the object of which is to enable an automobilist to "get home" with an injured tire cover. It is referred to as being made of the same good quality of rubber duck that the best tires are made of. It



is laced about the tire by means of ten strong eyelets, set in material of such character that it is impossible for the lacing to pull out. It will run through mud and water without hardening or cracking, as all leather and rawhide will do, and for this reason is more durable than tire boots of those materials. It is adjustable without tools, conforms to tires of any size, is noiseless, and runs as smoothly as a new tire. While this protector had not been intended for solid tires—which are not of the same shape as pneumatics—it had a very satisfactory test on a solid tire at Trenton during the recent State fair. A tire on an observation automobile, carrying 25 passengers, was giving away at the splice, and one of these protectors was put on. It lasted for four days, during which time the vehicle was in constant use, running to and from the fair grounds. The list price is \$4 each, for use on tires not over 4 inches in diameter; for larger sizes, \$4.50. [Empire Rubber Manufacturing Co., Trenton, New Jersey.]

WEED'S CHAIN TIRE GRIP.

AN effective and compact arrangement for the purpose of preventing the skidding of automobile wheels in soft earth and sandy soil and in snow is shown herewith, an invention which is just being placed on the market, although it has been subjected to two years severe test before being manufactured commercially. It is called the chain tire grip and is the subject of United States patent No. 768,495, issued August 23, 1904, to H. D. Weed. It consists entirely of small sections of chain held around the entire bearing surface of the tire by means of larger pieces of chain each side of the rim. The grip is said to be effective in snow, sand, or ice and its use does not damage the tire whatever. One of the principal merits of the grip is that it takes up almost no room when it is not in use and is being carried on the automobile. It is understood that this device already has met a large sale. [Harry D. Weed, Canastota, New York.]



A CANADIAN "MILITARY" BOOT.

THE illustration herewith relates to a new rubber boot which is designed to conform, as nearly as possible, to the English military leather boot. It is very straight in the leg, with reinforcement across the instep, the latter being a protection to the boot where the strap goes which holds on the steel spur. The leg of the boot is made very stiff, so as to stand up without wrinkling. The boot is made in bright finish, and in all sizes from 6 to 11, the gross price being \$5 per pair. The manufacturers advise us that this boot has been added to their list in response to a number of inquiries from the Canadian trade. [The Gutta Percha and Rubber Manufacturing Co. of Toronto, Limited.]



A NEW AUTOMOBILE SHIRT.

AN automobile shirt which lately has been placed on the market gives promise of proving very popular. It is large and roomy, and at the same time light, making it extremely comfortable. It is compact and can be tucked away in a small space. And better than either of these considerations, it is a fine protection against a storm. The front is fastened with a double row of ball and socket buttons. The collar laps over in front and ties with a draw string, making it impossible for water to get down the neck; and the sleeves have elastic bands at the wrists, making it equally impossible for water to enter there. Altogether, it appears to be an



excellent storm coat for automobile use. Goods of this class, by the way, promise to become an important item in the manufacture of water proof clothing in America, where there are already more automobiles than in other countries and motoring is by no means confined to fair weather. [National India Rubber Co., Bristol, Rhode Island.]

THE NEW KOKOMO AUTOMOBILE TIRE.

AMONG the first to make single tube tires for automobiles were the Kokomo Rubber Co. (Kokomo, Indiana), who state that they early came to the conclusion, since reached by makers and users generally, that single tube tires would not prove satisfactory in this field. This company, therefore, turned its attention to experimenting with the construction of tires of the clincher type, and while convinced that the clincher tire is the most practical now in general use for automobiles, they have felt that a need existed for something better, in the shape of a mechanically fastened tire. The Kokomo company, after long experimenting, is now prepared to offer something new in tire construction, which is illustrated on this page, and which it confidently claims to have superior merit—a tire which, in addition to its other qualities, can be put on or taken off the wheel in the simplest and quickest manner, the only tool required being a small wrench.

It will be seen, from the accompanying cuts, that the tire is easily on to a plain flat metal rim or band, and the retaining flange quickly bolted on. The tire is held in place by metal bands embedded in the lower part of the rubber, these metal bands having lugs welded to them which extend down through slots in the rim, said lugs preventing the creeping of the tire.

The inner tube is first put into the casing inflated and adjusted to its proper place, and does not, like other makes, have to be put into the tire deflated after the casing has first been put on the rim, and then inflated, causing it to be stretched in some places and crimped in others, which is most dangerous to the tube, and which has been a great drawback to detachable tires. Besides, other detachable tires have to be fastened to the rim with several clamps, which interfere with the inner tube and are troublesome to adjust. Rubber valve stems can be used in these tubes, whereas in other makes metal base valves must be used, for they depend largely on their valves to prevent creeping, and consequently these valves are liable to be torn from the tube, rendering the tire useless.

Owing to the manner in which this tire is fastened to the rim, there is no air space lost, and the tire has more cushion on air space, according to the sectional diameter, than other tires of the same sectional diameter. The substantial dimensions of the "lips" and side walls of the casing, and the great sectional diameter of the tire, are other characteristics to which the Kokomo people point with pride.



RECENT RUBBER PATENTS.

UNITED STATES OF AMERICA.

ISSUED SEPTEMBER 6, 1904.

NO. 769,172. Rubber tire. A. S. Krotz, Springfield, Ohio. [Described in THE INDIA RUBBER WORLD, October 1, 1904—page 17.]

- 769,243. Vehicle tire and fastener therefor. W. O. Worth, Chicago.
 769,278. Sprinkler and support therefor. L. Secord, Fort Collins, Colo.
 769,324. Rubber tread [for boot heels and the like]. P. W. Pratt, Boston.
 769,372. Painting apparatus. [Spraying through hose, by the action of fluid pressure]. J. J. Allen, Portland, Oregon.
 769,390. Shower ring [for use in shower bath]. W. H. Lawrence, Worcester, Mass.
 769,393. Fountain pen [with elastic ink reservoir]. P. Molin, Eslof, Sweden.
 769,405. Joint band [for sectional tires for vehicle wheels]. J. C. Raymond, New York city.
 769,427. Stylographic pen. D. W. Beaumel, Brooklyn, N. Y.
 769,451. Surgical pad. W. E. Ambrose, assignor of one half to H. O. Sommer, both of Washington, D. C.
 769,463. Massage roller. E. Blanchard, Coopersville, Mich.
 769,554. Fountain pen. H. M. Mannheim, St. Louis.
 769,602. Hose pipe or nozzle [for fire departments]. D. Fisher, Oil City, Pa.
 769,666. Tire. A. Papeux, Lyons, France.

Trade Mark.

- 43,278. Rubber boots and shoes and rubber for same. Rice & Hutchins, Inc., Boston. *Essential feature.*—The word EDUCATOR. Used since July 15, 1904.

ISSUED SEPTEMBER 13, 1904.

- 769,718. Tire [with core of granular material]. W. Sherbondy and S. H. Sturgeon, Akron, Ohio.
 769,741. Atomizer. I. Q. Gurnee, Butler, N. J., assignor to American Hard Rubber Co.
 769,755. Breathing apparatus [for supplying fresh air to workers in foul quarters]. C. W. Madsen, Chicago.
 769,829. Surgical instrument. I. K. Mott, Cincinnati, Ohio.
 769,847. Life preserver. A. Tann, Brooklyn, N. Y.
 769,946. Eraser [for lead pencils]. H. O. Keferstein, Barberton, Ohio.
 770,080. Device for protecting pneumatic tires. E. Lapisse, Elbeuf, France.

Trade Marks.

- 43,350. Belting. The Gandy Belting Co., Baltimore, Md. *Essential Feature.*—The word symbol DIXIE. Used since June 1, 1904.
 43,351. Belting. *Same.* *Essential Feature.*—The word-symbol OXYLO accompanied by the symbol of a cross and circle interlaced. Used since June 1, 1904.

ISSUED SEPTEMBER 20, 1904.

- 770,338. Bathing cap. J. Tooher, assignor to C. J. O'Hern and P. H. Crowley, all of Hyde Park, Mass.
 770,348. Tire for vehicle wheels. [Pneumatic]. C. Burnett, Durham, England.
 770,363. Finger-hold for penholders. B. B. Goldsmith, New York city.
 770,451. Fountain pen. V. L. Capwell, Dorranceton, Pa.
 770,452. Vaginal syringe. H. Carstens, Chicago.
 770,457. Automobile coat. R. Fox, New Rochelle, N. Y., assignor to Saks & Co., New York city.
 770,506. Spraying apparatus [for spraying plants]. F. A. Perkins, Port Dover, Canada.
 770,531. Pneumatic tired vehicle. C. Mercader, Pittsburgh, Pa.
 770,611. Detachable pneumatic tire. C. S. Scott, Cadiz, Ohio.
 770,612. Fountain pen. A. J. Scritchfield and J. E. Scritchfield, Janesville, Wis.

Trade Marks.

- 43,392. Boot protectors of metal and of metal and rubber. Blakey's Boot Protectors, Ltd., Leeds, England. *Essential feature.*—The representation of a last on which is the representation of a boot;

on the left is a boy and on the right a girl, driving protectors into the boot. On the lower portion of the last is the word PARAGON; the whole enclosed in a border. Used since 1886.

- 43,393. India-rubber shoes and goloshes. Ostasiatische Handels-Gesellschaft, Hamburg, Germany. *Essential feature.*—The representation of a bird's claw and the word CLAW. Used since Feb. 18, 1903.
 43,401. Waterproof and weatherproof compositions and roofing material treated therewith. The Paraffine Paint Co., San Francisco. *Essential feature.*—The word MALTHOID. Used since Jan. 1, 1903.

ISSUED SEPTEMBER 27, 1904.

- 770,739. Syringe nozzle. R. F. Coleman, Philadelphia.
 770,752. Dress shield. O. W. Hull, Battle Creek, Mich.
 770,791. Vehicle tire. W. E. Andrew, Atlantic Highlands, N. J.
 770,795. Pneumatic tire cover. C. R. Buxton, Palmerston North, New Zealand.
 770,896. Mold for tires. C. G. Fawkes, Denver, Colo., assignor to the Fawkes Rubber Co.
 770,914. Rubber sponge cup [consisting of an open elastic cup of rubber, the cavity of which is filled with a body of sponge rubber united to said cup and forming an integral article]. T. C. Marshall, Akron, Ohio.
 771,094. Hose coupling. S. M. Rhoads, Philadelphia, assignor to Philadelphia Brewery Appliance Co.
 771,156. Valve for pneumatic tires. J. E. Keller, Jr., Litchfield, Conn.
 771,175. Vehicle wheel [having a pneumatic cushion between the rim and the felly]. W. C. Potts, Harrisburg, Pa.
 771,190. Pneumatic tire guard. L. Vanderperre-Simon, Brussels, Belgium.

ISSUED OCTOBER 4, 1904.

- 771,257. Compound for waterproofing fabrics. [A mineral wax, almeidina gum, resin oil, and carnauba wax.] W. M. Mackintosh, Liverpool, England.
 771,272. Resilient tire. [Pneumatic or cushion.] S. T. Richardson and R. Price, Birmingham, England.
 771,274. Electric brush. [Hair brush with rubber insulating layers.] A. T. Sanden and V. Sence, New York city.
 771,296. Protector for pneumatic tires. [Layer of tough and pliant material, to cover the tread.] J. F. Burnam, Madison Station, Ala.
 771,350. Hose nozzle. F. J. Christman, Syracuse, N. Y.
 771,360. Fountain pen. A. Eberstein, Winthrop, Mass., assignor to C. Brandt, Boston.
 771,388. Clamp for closing leaks [for water pipes and the like; involving a rubber packing ring]. F. A. Nusbaum, Dayton, Ohio.
 771,435. Handle for hand stamps [partly of rubber]. S. W. Metcalf, Sisson, Calif.
 771,439. Hose coupling. J. F. McElroy, Albany, N. Y., assignor to Consolidated Car Heating Co.
 771,445. Rim for rubber tired wheels. O. L. Pickard, Chicago.
 771,538. Wheel rim for follow tires. E. M. Downs, Chicago.
 771,546. Sponge cup. [Cup made of rubber; having an opening at the top to receive the sponge, the opening being smaller than the body of the cup, and strengthened by a band surrounding the opening.] T. L. Harding and H. E. Heal, New York city.
 771,600. Douche apparatus. W. J. Bauer, Syracuse, N. Y.
 771,640. Vehicle tire. [A continuous channel base of metal; a band within said channel, and a rubber tread molded around the band.] W. R. Howe, New York city.
 771,651. Wheel [having a tire comprising a plurality of sections pivoted directly to the rim of the wheel, each section being independent of the others, and means to cushion each section to the rim]. E. S. Lea, Rutherford, N. J.
 771,674. Fastening device for pneumatic tires. T. Sloper, Devizes, England, assignor to C. H. Gray, Silvertown.
 771,677. Machine for making dress shields. A. C. Squires, Akron, Ohio.

Trade Marks.

- 43,435. Dress shields. C. F. Hovey & Co., Boston, Mass. *Essential feature.*—The word PEARL. Used since Feb., 1893.
 43,459. Rubber tires for vehicles. The Hartford Rubber Works Co. *Essential feature.*—The word GLADIATOR. Used since Aug. 1, 1904.

[NOTES.—Printed copies of specifications of United States patents may be obtained from THE INDIA RUBBER WORLD office at 10 cents each, postpaid.]

GREAT BRITAIN AND IRELAND.

PATENT SPECIFICATIONS PUBLISHED.

The number given is that assigned to the Patent at the filing of the Application, which in the case of those listed below was in 1903.

* Denotes Patents for American Inventions.

[ABSTRACTED IN THE OFFICIAL JOURNAL, SEPTEMBER 7, 1904.]

- 10,667 (1903). Electric cable. [Relates to the winding of a Gutta-percha covered cable with strips of iron wire passed through Chatterton compound or other insulating material.] S. G. Brown, London.
- 10,670 (1903). Boot soles and heels. T. Burrell, North Melbourne, Australia.
- 10,804 (1903). Pneumatic tire [with means of attachment to wooden rims]. R. Evans, London.
- 10,815 (1903). Pneumatic tire [having covers provided with tape or webbing to facilitate repairs]. A. J. Clitheroe, Ilford, Essex.
- * 10,826 (1903). Elastic tire [of solid rubber, in which wire staples are embedded to form a cross support for the retaining bands]. J. Coomber and three others, New York city.
- 10,911 (1903). Antimacassar clips [with rubber vacuum pads for the support]. C. T. Gann and F. R. Keef, London.
- 10,941 (1903). Rubber cords [for tire fabrics]. Christian H. Gray, of The India-Rubber, Gutta-Percha and Telegraph Works Co., Silvertown, and T. Sloper, Brittox.
- 10,942 (1903). Formers for making pneumatic tires. *Same*.
- 10,943 (1903). Pneumatic tire [of special fabric]. *Same*.
- 11,047 (1903). Exercising apparatus. F. W. Croucher, Fleet, Hampshire.
- 11,163 (1903). Machinery belting [formed of canvas strips, treated with a solution of India-rubber, Gutta-percha, or the like]. A. Hay, Glasgow.

[ABSTRACTED IN THE OFFICIAL JOURNAL, SEPTEMBER 14, 1904.]

- 11,171 (1903). Golf ball [marked with a view to giving the player a line of sight upon the ball in the direction in which he wishes to play]. G. W. Dawes, Roslyn, Lancashire.
- 11,197 (1903). Boot heels. B. Hopkinson and two others, London.
- 11,207 (1903). Method of molding pneumatic tire treads. W. P. Thompson, Liverpool. P. Eichmann, Frankfurt o/M., Germany.
- 11,291 (1903). Dress shield. [Means of retaining it in place when worn.] J. P. Wille, London.
- 11,294 (1903). Pneumatic tire protector. [A cover of interlaced metal rings, with a leather backing.] C. Keddie, London.
- 11,321 (1903). Life belt and deck seat combined. C. H. Le Mout, Hamburg, Germany.
- 11,345 (1903). Elastic tire. [A thin steel tire of elliptical section, having an India rubber tread.] W. Scott, Plymouth.
- * 11,391 (1903). Hose coupling. F. E. Paradis, Chicago, Illinois.
- 11,508 (1903). Heel protector. G. R. Holding, London.
- 11,651 (1903). Rubber threads and fabrics [for pneumatic tires, hose pipes, and the like]. C. H. Gray, Silvertown, and T. Sloper, Brittox.
- * 11,656 (1903). Golf ball and method of manufacture. F. H. Richards, Hartford, Connecticut.
- * 11,657 (1903). Golf ball and method of manufacture. *Same*.

[ABSTRACTED IN THE OFFICIAL JOURNAL, SEPTEMBER 21, 1904.]

- 11,785 (1903). Golf ball making machine. [For winding rubber tape or thread on cores.] M. McDaid, Edinburgh.
- 11,895 (1903). Nursing bottle [with rubber tube inserted through the stopper]. M. D. Armstrong, Forest Gate, Essex.
- 11,904 (1903). Pneumatic carpet cleaning device. S. Harvey, Nottingham.
- 11,007 (1903). Nursing bottle. G. Raines, London.
- 12,059 (1903). Golf ball [with core made from a length of rubber tubing, which is stretched on a stepped mandrel and while in high tension longitudinally is rolled back on itself, producing a ring]. F. A. Martin, Birmingham.
- 12,066 (1903). Rubber heel and sole. C. D. Douglass, Belfast.
- 12,110 (1903). Horseshoe pad. G. Topp, Frankfurt o/M., Germany.
- 12,204 (1903). Deformity appliance. [Plate of rubber, stiffened with steel wire and held in position on the toe by rings and bands.] H. J. Pond, Norwich.
- 12,211 (1903). Horse collar with pneumatic pad. J. E. Chilotey, Buenos Ayres, Argentina.
- 12,307 (1903). Boot heel and sole. G. Looms, Market Harborough.
- 12,319 (1903). Corset [with rubber breast forms]. M. J. Teufel, Stuttgart, Germany.

[ABSTRACTED IN THE OFFICIAL JOURNAL, SEPTEMBER 28, 1904.]

- 12,437 (1903). Pneumatic tire. [Relates to means of attachment to rim.] J. von Zastrow, Dinker, Westphalia, Germany.
- 12,576 (1903). Scraper for cleaning printers' rolls. J. Honeyman and A. Smith, Liverpool.
- * 12,603 (1903). Bottle stopper [with rubber disc]. H. C. Heide, London. (A. L. Weissenthanner, New York.)
- * 12,613 (1903). Fountain pen. H. B. Levy, New York city.
- 12,647 (1903). Tire for railway cars. F. Stephan, Mülhausen, Germany.
- * 12,717 (1903). Golf ball [in which driving power is obtained by employing a winding of stretched and twisted rubber strips, by means of which a large number of air cells are formed in the ball]. K. V. Painter, Cleveland, Ohio.
- 12,847 (1903). Apparatus for molding and vulcanizing the covers of "tubeless" pneumatic tires. L. Johnstone, Prestwich, near Manchester.
- * 12,858 (1903). Golf ball. [Described in THE INDIA RUBBER WORLD, August 1, 1904—page 383.] C. B. Elliott, Menlo Park, New Jersey.

PATENTS APPLIED FOR—1904.

Space is given here only to Applications for Patents on Inventions from the United States.

- 20,395. W. P. Thompson, Liverpool. Means for ascertaining pressure in pneumatic tires. (The Wray Pump and Register Co., United States.) Sept. 21.

GERMAN EMPIRE.

DESIGN PATENTS GRANTED [GEBRAUCHSMUSTER].

- 231,162 (Class 36). Suspenders made of inelastic bands having rubber loops on the front ends. G. Hohn, Goslar. Aug. 24.
- 231,544 (Cl. 63e). Attachment for vehicle wheels, consisting of a soft rubber rim which has in its lower part a metallic foundation imbedded in hard rubber. B. Panzer, Berlin. Aug. 31.
- 231,886 (Cl. 63e). Rubber tire containing a spiral wire tube fastened into the part that enters the felloe. Hannoverische-Gummi-Kamm Co., A.-G., Hannover-Limmer. Aug. 31.
- 231,773 (Cl. 68d). Sound deadener for doors, consisting of a rubber roller running upon a spring. J. Ruschmeyer, Berlin. Aug. 31.
- 232,121 (Cl. 30g). Nursing bottle having a connecting tube screwed into an inside sleeve of the nipple. M. Ochsler & Son, Ansbach. Sept. 7.
- 232,520 (Cl. 15g). Roller on typewriting machine with rubber covering of one piece of which the core consists of a porous elastic substance, pressed together for deadening the sound. M. Erdmann, Finsterwald. Sept. 14.
- 232,479 (Cl. 30d). Rubber plates for fastening lower sets of teeth to the under jaw. G. Wolf, Krefeld. Sept. 14.

THE FRENCH REPUBLIC.

PATENTS ISSUED (WITH DATES OF APPLICATION).

- 341,781 (March 31, 1904). E. Verlage. Pneumatic tire.
- 341,817 (March 31). A. von Lüde. Method for fastening pneumatic tires to motor wheels.
- 341,877 (April 5). J. P. Ebray. Double air chamber.
- 341,902 (April 6). L. Lancier. Anti slipping device for tires.
- 341,906 (April 6). J. Rejzek and R. Jelen. Removable rubber heel for shoes.
- 341,984 (March 7). T. E. A. Jouard. Solid rubber rim wheel, with spring spokes, for motor cars.
- 342,062 (April 9). Levy. Pneumatic tire.
- 342,070 (April 11). J. de Pontonx. Tires for automobiles.
- 342,151 (April 7). L. O. Lecocq. Elastic tire.
- 342,174 (April 9). C. Minke. Felloe with detachable flange for rubber tires.
- 342,385 (April 16). J. Cerqueda. Anti slipping device for pneumatic tires.
- 342,454 (April 19). J. L. Brown and B. King. Protecting device for pneumatic tires.
- 342,472 (April 20). R. Bellingham and J. Bloomfield. Pneumatic tire.
- 342,638 (April 26). H. J. Gaisman. New elastic woven tissue.

[NOTE—Printed copies of specifications of French patents may be obtained from R. Bobet, Ingenieur-Consult, 16 avenue de Villiers, Paris, at 30 cents each, post paid.]

THE NEW CABLE TO ALASKA.

THE territory of Alaska, which is daily becoming more and more important from a commercial standpoint, was, previous to October 10, isolated from regular telegraphic communication with the United States and the outside world.

Although telegraph lines have been built under the most discouraging circumstances, connecting the principal government posts in Alaska, it was necessary, in order to reach the United States, to have these messages repeated over English lines running through British Columbia. The severe weather of those latitudes during six months of the year makes it almost impossible to maintain these lines in working condition, and at the same time it was not thought desirable to have the official news of our army outposts transmitted over English circuits.

To obviate this difficulty, General A. W. Greely, chief signal officer of the United States army, drew a plan whereby Alaska could be in direct communication with the home country by the use of a deep sea ocean cable. An appropriation was made by the Fifty-eighth Congress to carry out this plan.

In looking over the situation, it was found that difficulties were to be encountered never before met in submarine cable engineering, as this line was to be laid in a latitude not previously reached by submarine cables. The question of the excessive cold to be met with, the glaciers, that were continually discharging their mountains of ice directly along the course of the cable, and the practically uncharted waters, were a few of the engineering points to be overcome.

The unbroken line of success that was met with in connecting together the various Philippine islands by ocean cables of American manufacture, led General Greely to again pin his faith on *seamless* rubber insulations, and in considering the subject of specifications, he consulted with the company that had manufactured the Philippine islands cable.

It was decided that a copper conductor consisting of nine strands should be used, insulated with: (1) A *seamless* covering of pure Pará rubber; and (2) a covering of vulcanized rubber, also applied in a seamless manner. The conductor was then served with jute, and protected with steel armor wires, having a tensile strength exceeding 200,000 pounds per square inch, these being in turn protected with a jute and asphalt compound.

Three types of cable were designed for this work: (1) The Shore-end, which was protected by a double armor of great strength, the finished cable weighing 20,000 pounds per mile, the Shore end type extending from the landing stations well out into deep water, where (2) an Intermediate type was spliced on, having a single serving of heavy armor wires. After reaching a point 100 miles from the shore, and where a depth of 2000 feet was found, (3) the Deep-sea type, having a lighter armor wire, was laid, this latter being the principal type of cable used, and out of the entire length of 2088 miles, 1500 miles were of this class.

This cable was manufactured at the Bayonne plant of The Safety Insulated Wire and Cable Co. (New York) two ship loads being sent around Cape Horn, and 35 car-loads across the continent.

The great advantage of India-rubber over Gutta-percha as an insulator was readily shown in this work, as the cable shipped around the "Horn" was transported in commercial steamers, and did not require the iron tanks, filled with water, which would have been imperative had Gutta-percha been used as an insulator, to prevent the dielectric from softening, while it would otherwise have been impossible to ship that form of cable in freight cars across the continent.

The conductors were transported to the United States cable-ship *Burnside* at Seattle, and were laid under the personal supervision of Colonel James Allen, of the Army signal service, assisted by officers of his corps. This cable is the longest span having rubber insulation thus far laid, and when it is considered that the greatest depth reached was approximately 10,000 feet (nearly two miles) it will again prove beyond a doubt that rubber insulation, applied by special methods designed by American engineers, has every advantage over the old type of Gutta-percha cable.

In the manufacture of this cable over 365,000 pounds of high grade Pará rubber compound were used, and cable companies need not longer fear the extinction of the Gutta-percha tree, which for twenty years past has been their *bête-noir*.

There are now in actual daily operation approximately 5000 miles of rubber insulated deep sea cables manufactured by the Safety company, covering the extremes of temperature, from the torrid waters of the Philippines to the ice bound seas of Alaska.

This success is evidence of the far sighted policy of the United States government, in trusting to American engineering ability, while at the same time encouraging home industries, a policy which might be followed to the great advantage of our commercial companies in the purchase of future ocean cables.

The distance from Seattle (state of Washington) to Sitka is about 970 miles; from Sitka to Fort Liscum, at Valdez, Alaska, is 565 miles, making a total of 1535 miles from Seattle to Valdez. From Sitka a branch extends to Skagway, a distance of 292 miles, touching at Juneau and Haines Mission. This service connects with the extensive overland telegraph system already established by the United States government in Alaska, and with certain existing submarine communications between military posts, in addition to which is to be considered the wireless telegraph service maintained by the government across Norton sound, between Nome and St. Michaels, a distance of 108 miles. The completion of the cable system was signaled by the sending of the following despatch:

SITKA, ALASKA, October 6, 1904.—*To the Newspapers of Seattle and the Associated Press:* The completion of the government cable from Valdez to Sitka, making a complete connection by an all-American line with 46 stations in Alaska, is the beginning of a new era for Alaska. Wagon roads and railways will open up the greatest mining center of the world. Other industries will quickly follow and insure this country's future prosperity.

WILLIAM L. DISTIN.
Acting Governor of Alaska.

ANOTHER PACIFIC CABLE PROPOSED.

ARTICLES of incorporation for the North American Telegraph Cable Co. were filed at Seattle, Washington, on May 5, 1904, which provide for the building of a submarine cable from Seattle to Valdez and other points in Alaska, and thence to Vladivostock, Russia. The incorporators were Judge Thomas Burke, Robert Moran, A. E. Lathrop, J. T. Flynn, and other residents of Seattle. The last named is editor of *The Midnight Sun*, a Seattle journal devoted to Alaskan commerce. Judge Burke represents the interest in the enterprise of the Great Northern railway. It is the intention of the company to interest capital in extending the United States government cable to Russia, this making another length across the Pacific ocean. Nothing, of course, will be done until the end of the Russian-Japanese war, when active steps will be taken to complete this work. The Seattle-Valdez cable being a government line will, of course, be open to transmit all messages for the new company as far as their line extends, where it is the intention to transfer them to their own cable.

THE SINGAPORE GUTTA-PERCHA TRADE.

TO THE EDITOR OF "THE STRAITS TIMES" (SINGAPORE).

YOUR informant on Gutta adulteration evidently knows very little of the article, and his fantastic and misleading statements ought, I think, in the interests of the reputation of Singapore trade, to be contradicted.

The shipments of Gutta from London to Singapore represent to a great extent Singapore consignments sent back to their unlucky shippers. The principal consumers of Gutta having now their buyers in Singapore, will buy nothing in the London market, and certain qualities were absolutely unsalable in London, although prices in Singapore had gone very high. The consequence was that several lots have been brought back.

If Balata has been imported, it must have been in quantities of not very much importance. Besides, as you know, there are hundreds of different sorts of Gutta, worth from \$5—up to \$700—per pikul [=133½ pounds], according to their special merits.

Every small place where the article is collected sends to Singapore different sorts, which you must divide again into different graduations according to quality, so that every single piece of Gutta has to be valued separately and you must even cut them through, because you mostly find that the inside of a piece is quite different to the outside. You also probably will know that a very large quantity of this Gutta has always been boiled and mixed again in Singapore by half a dozen large Chinese dealers. This is done partly to utilize numerous small lots of Gutta which on account of their irregular supply cannot be sold as they are, and many pieces refused by the European buyer on account of their adulteration with wood or stones, which for that reason have to be cut into small pieces and cleaned.

The reboiling is also done to utilize inferior qualities, which unless mixed with better qualities would much sooner deteriorate, and many hundreds of tons of Soh and Jolotong, worth from \$5 to \$15, have been so treated every year ever since the export of Gutta from Singapore began. The Chinaman, as long as he hopes to deceive the buyer, will evidently try to put into his mixture as little as possible of the good expensive Gutta and as much as possible of the low kinds. The buyer knows all this very well, but, as it would not be more convenient for him to do otherwise, has always taken the many sorts of reboiled Gutta, which the Chinamen prepare, trying to be as careful as possible, in order not to pay for it in excess of its actual value.

You will see from this that if the mixture of Gutta with Soh and Jolotong worth \$5 to \$15 has never done any harm to the Singapore trade it must be absurd to say that any mixture with Balata, which is a superior sort of Gutta worth from \$100 to \$200 per pikul, can have had any such effect. If any such mixture has taken place, which seems strange, considering the high price of Balata compared to inferior sorts of Gutta formerly used, it would have had only the effect to improve the average quality of reboiled Gutta. That the quality of all Gutta sorts (genuine more than reboiled) has been getting poorer and poorer for the last 20 years is quite true, but the reason for this has nothing to do with adulteration in Singapore. It is from the jungle that a lower Gutta is brought out, partly because the plants giving the better qualities have more and more been destroyed, partly because the natives, on account of the very high prices, found it easier to sell even inferior quality and do not take the trouble to prepare the Gutta so carefully as formerly. To say that adulteration in Singapore can have anything to do with the decreased exports is absurd.

The demand has naturally ceased last year on account of the completion of some large cables. The manufacturers having

no new orders for cables cannot buy. We are going now through a period of stagnation, due to want of demand, which it is hoped will cease if new cables have to be constructed. The trade has not gone elsewhere, as your informant says, and there is no reason to think it will shift to any other place unless the reputation of the market is damaged by alarming statements. Yours faithfully,

X.

Singapore, September 6, 1904.

* * *

EDITORIAL NOTE.—The above communication to *The Straits Times* has been called forth by the recent publication in that journal of some articles on the Gutta-percha trade, one of which was copied into the August 1 issue of *THE INDIA RUBBER WORLD* (page 379). The point made by the Singapore journal was that the trade in Gutta-percha had been injured by the wholesale adulteration alleged to have been practiced, and reference was made to the use of Balata for this purpose. The latter supposition appears to have been strengthened by some statistics presented by *THE INDIA RUBBER WORLD*, relative to certain exports from London to Singapore. The article above reprinted apparently is from a well informed source, and no doubt fairly represents the situation; i.e., less Gutta-percha has been shipped lately because the demand was less, and present prices of Balata would preclude the use of that material as an adulterant. *THE INDIA RUBBER WORLD* has not claimed to possess definite information on all the points involved, but has sought to arrive at the facts, and the article signed "X" appears to explain satisfactorily the London exports to the Straits. At the same time, it cannot be assumed that the supply of Gutta-percha is unlimited, and it will be of interest to note the effect upon prices of the next large increase in demand.

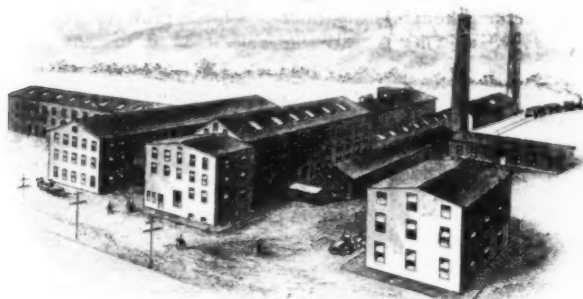
ROENTGEN RAYS IN CABLE MAKING.

AN interesting application of Röntgen rays in cable manufacture is described by W. Otto in *Electro* (Berlin, August). The chief value of this apparatus is in detecting foreign substances and imperfections in the India-rubber or Gutta-percha insulation of electric cables. The apparatus is of particular value in preparing submarine cables, since here defects which might ultimately give much trouble and cause great expense for repair are easily detected. The device consists of a table containing the necessary regulating apparatus. On this a Röntgen tube is fixed, and above it is placed the fluorescent screen. The cable to be examined is passed through guides, which conduct it just below the screen, so that the shadow of the cable is thrown upon the screen. This arrangement allows the cable to be passed through the testing apparatus quickly. Any foreign substances or a bubble of air, or even a bad joint in the rubber, is at once shown. It is convenient to have the apparatus portable, so that it may be taken to any part of the works.

A MOVEMENT is on foot at Montreal to organize a "technical institute," to afford opportunities for the better training of factory employes who may wish to become more proficient in their respective lines of work. The cause is heartily supported by some of the manufacturers, including Mr. D. Lorne McGibbon, general manager of the Canadian Rubber Co. of Montreal, who writes a strong letter to the *Montreal Star*, pointing out the great benefits to German industry of the technical schools in that country, the growing interest in technical education in the United States, and how Canada may be benefited by similar methods.

SETAUKET RUBBER FACTORY BURNED.

THE principal buildings comprised in the rubber plant at Setauket (Long Island), New York, were destroyed by fire early in the morning of October 18. The fire was first seen by the village baker about 2 A. M., and John Kashaw, a factory foreman, is reported as saying that flames were raging in three places when he arrived, 20 minutes later. At 6 o'clock the buildings were in ashes. On account of repairs in progress on the boilers there was no steam on, and the water tank was empty. The premises were in use (1) by B. Elbersen & Co., in the manufacture of rubber heels; (2) by the Anchor Tire and Rubber Co. in making mold work, in a small way; and (3) by W. C. Coleman & Co., in grinding hard and soft rubber scrap. Only the Coleman company were not completely burned out. They lost some machinery, but their stock was stored in a three story warehouse, 50 X 75 feet, located at some distance from the buildings that were burned. How the fire originated has not been explained, and there are conflicting statements as to how fully the property was insured. The amount of the loss is reported as high as \$150,000.



THE SETAUKET RUBBER PLANT.
[From a letter head of one of the Elbersen companies.]

The Long Island Rubber Co., incorporated under New York laws, began in Setauket, Long Island, in 1876, the manufacture of mechanical rubber goods, under the management of Robert S. Manning, who had been employed before by the Hamilton Rubber Co., of Trenton, New Jersey. The premises occupied had formerly been used for a piano factory. This company went into liquidation in 1879, at which time the L. B. Smith Rubber Co. was incorporated under New York laws, and began the manufacture of rubber boots and shoes. The company was named for L. B. Smith, a farmer of Smithtown, who became the principal stockholder. The company's product was of the grade called "thirds," which was at that time new to the trade and at first proved of slow sale. Later the manufacture of third grade goods became general, and the company met with much competition. At one time they made extensive contracts for the sale of their goods through C. H. Fargo & Co., of Chicago. The Smith company manufactured daily for several years 12,000 pairs of rubbers, and their production proved to be too large for the Fargo firm to handle. In 1888, the latter firm becoming temporarily embarrassed, the L. B. Smith Rubber Co., holding claims against them of \$275,000, were forced to a reorganization. The company was succeeded in June, 1888, by the Brookhaven Rubber Co., a West Virginia corporation, with \$500,000 capital, which company carried on the manufacture of third grade rubber footwear to July, 1894.

On the formation of the United States Rubber Co., in 1892, Charles R. Flint, who was a creditor of the Brookhaven Rubber Co. for crude rubber supplied, and had converted his bills re-

ceivable into stock of the company, put his holdings into the combine in exchange for shares of the United States Rubber Co. The president of the Brookhaven company at the time was Joseph W. Elbersen, who had been connected with the Setauket plant since the beginning. The management of the United States company gradually obtained complete control, as witnessed by a contract dated March 9, 1894, and still hold the 5000 shares. Under the same contract, however, the Brookhaven plant was sold to the North American Rubber Co., a New York corporation formed by the Elbersen interests, but with the stipulation that rubber footwear should no longer be made at this factory.

The Elbersen interest soon procured the incorporation, under New Jersey laws, of the Liberty Rubber Shoe Co., which resumed the manufacture of rubber footwear at Setauket, and they had attained a large output of third grade goods when, in 1898, after active opposition from the United States Rubber Co., they accepted an offer from the latter which enabled them to discharge all their liabilities, the Liberty company or the Elbersen interests agreeing not to make rubber shoes before July 1, 1903. The Setauket plant has since been operated intermittently, generally on a small scale, but under a long list of names, including Manhattan Rubber Co., Manhattan Rubber Shoe Co., Iroquois Rubber Co., Montauk Rubber Co., Para Rubber Manufacturing Co., Excelsior Rubber Co., and so on with all of which J. W. Elbersen has been more or less actively connected. The Coleman company, however, was an outside enterprise, which had lately leased part of the facilities of the place.

THE COTTON GOODS MARKET.

AT PROPOS of the beginning of the season, when the Rubber industry and the textile manufacturers are supposed to have arranged their plans for the year, a few facts relative to the two trades should be considered timely. In considering the raw material situation, it can be said that the greater part of the cotton in the upland districts of the south has been gathered, and with two more weeks of such favorable weather and equal progress in picking everything in the uplands will be gathered. There will be no top crop and as cotton has been opened at one time, relatively speaking, the picking season will be exceptionally short. In the lower half of Texas, picking has been practically completed, and only one-fifth of the crop remains in the northern counties. From the best authority it is learned that this crop is likely to prove considerably smaller than has been counted upon. In the other two big crop years, the picking was continued until well into the following spring, owing to the abundance of cotton and the large top crop. This year there is but little top crop and when cotton now open is gathered, it will all be in. It is contended that 11,000,000 bales will prove the maximum limit, and that the crop may be considerably smaller. This is, in fact, the opinion of the majority of observers. The world's visible supply of cotton shows an increase compared with last year of 577,894 bales, and an increase compared with the year before last of 247,876 bales.

But the fabric end of the market is the most interesting at the present time to the manufacturers of rubber goods. The situation differs in a great many respects from that of last year, but without reference to the adversities of a year ago, it must be said that the rubber people, who at that time refrained from making a yearly contract, preferring to take their chances of buying cotton duck at a lower figure from time to time, suffered substantial losses, and have this year fortified themselves against a repetition by returning to their former custom of

ordering for the entire year. Furthermore, a great many who have always bought from hand to mouth have abandoned that policy and are covering their requirements for the season. Among the first to make contracts this fall, are those who last year experienced great inconvenience in getting satisfactory delivery. A year ago raw cotton was selling at 9½ cents and the mechanical rubber industry was placing its contracts at from 19 to 25 cents per pound, for cotton duck. To-day the duck manufacturers are covered with cotton at from 10 to 10½ cents a pound and the rubber manufacturers are making contracts at about 20 cents a pound. Comparatively few rubber concerns made a yearly contract last November, preferring to buy their cloth as they needed it, and take the chances on having to pay a higher price. This proved to be rather an expensive experiment, as many consumers paid from 25 to 27 cents a pound during the latter part of the season. In fact, the orders came in so rapidly during the late summer months that the manufacturers of duck were compelled to turn them down, and some were obliged to pay 27 cents, as compared with 19 cents, which their competitors who made yearly contracts paid.

It is understood, however, that some contracts have been made at below 20 cents a pound this year. The minimum quantities contracted for by the mechanical rubber people are said to have been 100 per cent. in excess of those of last year, which tends to show a greater degree of confidence in the raw material market on the part of the rubber manufacturers. It would be difficult to find an idle loom in the duck mills at the present time. Not only has the home demand increased sufficiently to put them all at work, but the demand for export has eclipsed the call for many years. During the past fortnight the Japanese government has ordered more than 1,000,000 yards of standard duck to be delivered as soon as the mills can turn them out. These contracts have been distributed among all the duck mills in this country. The recent burning of the LaGrange, Georgia, mill, one of the plants of the United States Cotton Duck Corporation, has made it necessary to place these orders elsewhere for execution, and the rubber manufacturers have no need to fear about deliveries being made in regular order. If there are any mechanical rubber concerns who contemplate purchasing on the hand to mouth principle, it may be to their advantage to know that spot duck is worth at the moment 20 cents, but delays may be dangerous, for the duck manufacturers have bought their cotton, and no matter how low the staple may decline the fabric market will not ease off, but is more likely to advance on account of the independence of the cotton manufacturers, who are not looking for much more business.

Readers of THE INDIA RUBBER WORLD may recall an article published in these pages three months ago, in which it was predicted that the price of duck would be based on 10 cent cotton, which situation appears to have materialized.

From the standpoint of the mechanical rubber manufacturer, the outlook is bright, so far as the textile end is concerned. They consider the present condition of the market greatly in their favor when compared with that of last year, and if the raw rubber market does not militate against them, there is no reason why the coming year should not be a profitable one. Certainly, they have an easier road to travel in considering their cotton cloth purchases. The finer yarn goods, such as osnaburgs and light-weight sheetings, have not materially changed, although the market is firmer than last year. Consumers of this class of goods are not hesitating on account of prices, but are ordering as their necessities dictate. The time is past when the possibility of lower prices can be considered any inducement for them to wait.

THE DEFLATED TIRE.

[FROM "THE FINANCIAL NEWS" (LONDON), SEPTEMBER 17.]

IT must be rare that an event in the history of a company commands such widespread interest as that which the Dunlop Tyre Company celebrated last night—the expiry of its famous patent. Premonitions of the event have of late been forced upon the notice of the cyclist most innocent of cycle company lore in the attractive reductions in the price of "outer covers," by announcing which the man at the cycle shop has tempted his customers to re-cover their wheels; and the directors and managers of the great company itself, so far from keeping quiet about the withdrawal of the legal monopoly for the famous "wired-on" tire, have boldly taken the bull by the horns, and given to the event the *éclat* of a public banquet. In this they have shown themselves wise, as well as bold. Silent treatment of the matter would not have avoided the public knowledge of it, or the access of competition which its coming will mark, with the consequent necessary revision of trade prices; whereas a dinner, with invitations to the press, and speeches, and all the other concomitants of publicity, brings something additional to the general knowledge: it reminds the public that, though left without the law's protection of privilege for its patents, there is life and vigor in the old dog yet. The old firm has not the smallest intention of retiring before the swarm of competitors who may be expected to rise up against it now that competition will be upon more equal terms; and so, though the festive proceedings last night could not avoid the appearance, to an extent, of a funeral collation, they may also be taken as the celebration of a Phoenix-like rebirth—in more business-like language, a rattling advertisement for the company now commencing to trade under the new auspices. The company deserves its advertisement. The cyclist, short of cash, may have found the price of a new Dunlop-Welch tire somewhat oppressive at times (though reductions have been made of late years); but, being no longer the "cad on castors," upon whom the *Sporting Times* lavished its vituperation in days gone by—and no longer so, mainly because Mr. Dunlop and his company made cycling an amusement and a means of locomotion in which everyone could, and did, indulge—the cyclist is not an ingrate; and he cannot altogether repress affection for the undertaking whose invention has sped him so many blissful miles.

That is where the Dunlop company is bound to retain a pull over its competitors for many years to come. Critics of its finance point to the thumping sum for goodwill which appears in its assets—and, true, it is somewhat of an awe-provoking amount, and one which, no doubt, the board will very considerably reduce when it reorganizes the company's finances to suit the changed conditions—but the company has acquired, and will retain, a very substantial goodwill. In the days of their patented protection Dunlop tires made for themselves a name of excellence, and it will be long before a purchaser, offered the choice at equal, or even approximately equal, prices, between a "Dunlop-Welch" and a "Brown-Jones," will hesitate in his selection. Probably he will become more attached to the Dunlop than ever; for he will not only have old association to guide him, but the thought that if in their privileged days these tires were among the best on the market, they are still more likely to be among the best now that the privilege is withdrawn, and the company has to fight for its trade upon conditions equal save for such advantage as its name may give to its wares. Meantime, we may express a hope that the competition to which the Dunlop company is now to be subjected will not be carried too far. Competition is a healthful tonic;

but the most healthful of tonics may be taken in overdoses. The Dunlop company has struggled vigorously against competition in the past by buying up competitors, such as the Palmer, the Clincher, the Westwood Rim—but their name is legion; and, by ordinary market methods, or by amalgamations, it will probably so deal with competitors in the future. That is a matter in which the public may stand aside, so long as it gets served with good articles at reasonable prices, and so long as the competition is home competition; but there are threats and prospects of foreign competition, now that the protection of the patent is gone, and as that menaces the employment of English workmen, it will not be proper for the English public to stand aside; it will be its business to see that the Dunlop company—and, of course, its competitors within the kingdom equally—gets protection of another kind; for our admiration of the Anglo-French *entente* cannot be carried to the pitch of watching the English tire trade handed over to the French manufacturers.

THE END OF THE DUNLOP (WELCH) PATENT.

ON the evening of September 16, at the Hotel Cecil (London), a company numbering over 400 assembled at dinner, in response to the invitation of the chairman and directors of the Dunlop Pneumatic Tyre Co., Limited, "in honor of the expiry of the Welch patents." Mr. Harvey Du Cros (the chairman of the company) presided.

Mr. Arthur Du Cros, in proposing the toast of "The Guests," said that many of the gentlemen present had helped to elevate the cycle industry to the foremost position among British industries. Although the trade had seen many vicissitudes and many changes, still they might justly be proud of the position to which it had been brought by the energy and ability brought to bear. The success of the Dunlop tire had been due to its reliability, and in this matter the colonists had materially assisted. The English trade had successfully withstood the shock of foreign competition, where other industries had seriously suffered. Their foreign friends had thought the British nation was not only slow to move in such matters, but slow to think; but he thought they might now congratulate themselves on the fact that they had overtaken the long lead that the foreigner had obtained on them in the motor industry, and were to-day racing him neck and neck for the premier position. Certainly this company had broken all records in regard to all cases connected with patents. This dinner had been given to celebrate the reaching of the end of the first volume of the history of the invention. The possession of a patent was not an unmixed blessing. Ordinary business was sufficiently trying; but, having regard to the bitterness and jealousy surrounding a successful invention, they could not view the expiry of a patent with feelings other than those of relief and equanimity. Messrs. Walter Hewitt, Frank Bowden, and G. Vernon Pugh responded to the toast.

"Our Hosts" was then proposed by Mr. Eadie. Mr. Harvey Du Cros, in responding, said that, while the Welch patent expired that night at 12 o'clock, the Dunlop motor-tire patent would continue for another nine weeks; but from now the price of automobile tires would be reduced to the amount charged by foreign standard makers.

The advent of the midnight hour, and consequent expiry of the Welch patent, was marked by an interesting ceremony. The official document relating to the patent was solemnly consigned to the flames, amid the strains of Chopin's "Funeral March" and the tolling of a bell in a grandfather's clock, situated behind the presidential chair. Then Mr. Du Cros pro-

nounced an elegy in the following words:

"Here lies Welch; he was saddle or arched shaped; he rested on a median convexity; his boundaries were inextensible; he dies, and yet he lives—no longer for the few but for the use of all. According to Irish custom, this is his wake; these are his ashes. But according to another monumental legend, there arises from these ashes a phoenix. That phoenix is Dunlop, the manufacturer. Welch is dead—Dunlop lives. He, too, is saddle or arch shaped; his median convexity is the world; his boundaries are extensible—may they extend. Long live Dunlop!" (Loud applause.)

The proceedings were diversified by an agreeable concert.

RUBBER INTERESTS IN EUROPE.

GRAND PRIZES FOR THE CONTINENTAL COMPANY.

THE international jury of awards at the Louisiana Purchase Exposition at St. Louis awarded two grand prizes to the Continental Caoutchouc- und Guttapercha-Compagnie (Hanover, Germany). The first was for their exhibit of pneumatic tires of the widely known "Continental" pattern, and the second for their extensive display of balloons for meteorological purposes and for details of balloon construction.

A NEW ENGLISH COMPANY.

KENSINGTON Rubber Co., Limited; registered September 26, 1904. Capital, £1000 in £1 shares. Object, to carry on the business of manufacturers of and dealers in India-rubber materials, goods, wares, and articles of all kinds, including inner tubes and outer rubbers for pneumatic tires for cycles, motor cars, and other vehicles, insertion sheeting, hose and general piping, brake blocks, mats, valves, and washers, etc. No initial public issue. Registered without articles of association.

AUSTRIA-HUNGARY.

HERR ADAM ZINKHAN, for many years chief of the shoe department of the Oesterreichisch-Amerikanischen Gummifabriks A. G. (Wien-Breitensee), has retired from the rubber business, the first named firm being absorbed on agreement by the Vereinigten Gummiwaren-Fabriken Harburg-Wien. Herr Zinkhan has entered, as a partner, the firm Johann Pacher's Nachfolger, Zinkhan & Hiebleitner, machinery and fine tools manufactory, Siebensterngasse, 30, Vienna.

GERMANY.

THE directors of Deutsche Gummi- und Guttaperchawaaren-Fabrik, vormal's Volpi & Schlüter, Aktiengesellschaft (Berlin), are disposed to make a sale of the property and business. This is a long established factory, engaged in making technical (mechanical) rubber goods, to which boots and shoes were added in 1896.

WIRELESS TELEGRAPHY ON THE AMAZON.

ON the steamer *Marenhense*, which sailed from New York on October 25 for the Amazon, was Mr. R. H. Mardock, *concessionaire* for wireless telegraphy on the Amazon, and secretary to the commission from the state of Amazonas at the St. Louis World's Fair. The concession referred to is to be exploited by the Amazon Wireless Telegraph and Telephone Co. [See THE INDIA RUBBER WORLD, October 1—page 28], which shipped by the same steamer the necessary material for the installation of two wireless telegraph stations in the state of Pará—at Pará and Erees. The material for the other stations required to complete the service to Manaus will be forwarded in due course. A party of experts to install the service also sailed on the *Marenhense*.

NEW TRADE PUBLICATIONS.

THE B. F. GOODRICH Co. (Akron, Ohio) have issued a new illustrated and priced catalogue of Mechanical Rubber Goods, which merits more than a mere formal mention. In the first place, it represents notably the advance in attractiveness which has been apparent of late in trade publications relating to the rubber industry, until now lists of such prosaic commodities as belting and hose are made as pleasing to the eye as any other trade announcements published. But it is progress of a different sort to which we desire to call attention more particularly.

This catalogue presents, in contrast, a view of the small building in which the Akron Rubber Works had its inception, in 1869, and one of the present Goodrich plant, covering 15 acres, which represents the result of their 35 years' of business life. To a certain extent this comparison may be considered as typical of the growth of the rubber industry in America as a whole, though it is only fair to the company under review to recognize that their growth has been much beyond the average of the industry.

Coming now to the reading matter in this catalogue—and apart from the fuller details and better arrangement of matter relating to the leading staples than were formerly to be seen in a book of this class—its perusal is of no little interest on account of the number of items embraced which are comparatively new to the rubber trade, though already of great importance in the industrial world. Pneumatic tool hose, for example, is treated prominently, together with air drill hose, air brake hose, and a great number of other items that did not figure largely, if at all, in the mechanical rubber goods catalogues of a dozen years ago. The pictorial representation of the growth of the Goodrich rubber works is instructive, but it is not more striking than would be a comparison of the list of industrial applications of India-rubber in 1869 with those indicated in the latest Goodrich catalogue. [5¼" × 8¼". 71 pages.]

THE B. F. GOODRICH Co. (7, Snow Hill, London, E. C.) issue "A Catalogue of India-Rubber Druggists' Sundries and Other Rubber Specialties," which is a very comprehensive and attractive presentation of their products in these lines, the book being well printed on good paper and profusely illustrated with excellently executed engravings. [5¼" × 8¼".] 62 pages. —Prices are not given in the preceding catalogue, but these are supplied in an accompanying list of 22 pages, dated August 15, 1904.

NEW YORK BELTING AND PACKING CO., LIMITED, issue from their branch at No. 150 Lake street, Chicago, their "Fire Department Catalogue No. 12," which is an exceptionally full list of fire department supplies. It begins with a list of hose brands made at the factory of the Fabric Fire Hose Co. (Sandy Hook, Connecticut)—which is an affiliated company—followed by hose carts, reels, trucks, hand engines, and a long list of accessories, which serves better perhaps than any other catalogue yet issued to indicate the great variety of rubber factory products which enter into the equipment of a modern municipal fire service. The book is liberally illustrated, and prices are given of all the goods listed. [8¾" × 6¾". 190 pages.]

MORGAN & WRIGHT (Chicago) issue a brochure with the title "Book of Vehicle Tires," descriptive of their line of solid and cushion rubber tires, adapted to standard channels. The attention of dealers is directed to their tire stock on reels of 500 feet. The Morgan & Wright tire fitting machines are also described, in addition to which a number of tire sundries, especially for the repair shop, are listed. [6" × 9". 32 pages.] —"Modern Horseshoeing," issued by the same firm, is a

treatise on the advantages of rubber pads for horseshoes, followed by a list of Morgan & Wright products in this line. [3¼" × 6¾". 20 pages.]

THE DIAMOND RUBBER CO. (Akron, Ohio) are issuing some distinctively original and attractive booklets, relative to their products, a recent specimen of which, entitled "The Delectable History of a Peaceful Servant," introduces the subject of Garden Hose in a style quite out of the ordinary. [3¼" × 6". 16 pages.]

NEPONSET RUBBER CO. (Hyde Park, Massachusetts) have issued their first catalogue, devoted to Mechanical Rubber Goods. The priced list relates to belting, hose, packing, gas-kets, matting, mats, springs, diaphragms, tubing, rubber carriage drill and duck, and molded sundries. [5" × 7½". 35 pages.]

BANNER RUBBER CO. (St. Louis) issue, as a souvenir of the St. Louis World's Fair, a brochure entitled "How Rubber Boots and Shoes are Made," giving the history of an article of rubber footwear in detail, from the extraction of the rubber in the forest. The text has been excellently prepared by Mr. W. E. Hemenover, secretary of the company. [3" × 6". 16 pages.]

ACTIENGESSELLSCHAFT METZLER & Co. (Munich, Germany) have issued Preis-Liste B No. 1, of surgical rubber articles and kindred goods, of their manufacture. It is a very complete publication, illustrated with several hundred cuts, and bound in boards. [7" × 9¼". 180 pages.]

DAVID BRIDGE & Co. (Castleton Iron Works, Manchester, England) issue, as "An Addition to Our Catalogue," a series of half tone views of India-rubber washing machines, mixing machines, calenders, and vulcanizing presses, with shafting and gearing, of the latest types of their production. [9¼" × 6". 15 leaves.]

ALSO RECEIVED.

REX Buggy Shield Co., Connorsville, Indiana.—Vestibule Storm Shield. 6 pages.

Charles E. Miller, Nos. 97-101 Reade street, New York.—Automobile Catalogue, No. 6. [Automobile, motor boat, motor cycle, and bicycle parts and accessories.] 160 large pages; illustrated.

The Hartford Rubber Works Co., Hartford, Connecticut.—Hartford Solid and Cushion Tires. 15 pages.

The Diamond Rubber Co., Akron, Ohio.—Diamond [Tires] for 1905. 12 pages.

The Sweet Tire and Rubber Co., Batavia, New York.—Sweet Rubber Tire Applying Machine. 4 pages.

Voorhees Rubber Manufacturing Co., Jersey City, New Jersey.—Rubber Tires. 4 pages.

The Milwaukee Rubber Works Co., Cudahy, Wisconsin.—Solid and Cushion Tires. 11 pages.

Empire Rubber Manufacturing Co., Trenton, New Jersey.—The Auto Tire Protector. 4 pages.

Continental Caoutchouc Co., No. 298 Broadway, New York.—Automobile Accessories. 32 pages.

COLOR BAROMETERS FOR ADVERTISING.

A VERY neat and attractive advertising novelty is the color barometer. One form of it, and a cheap and effective one, is a figure of a little maid on card board, with a real cloth skirt on. This skirt being chemically heated, changes color, for fair or for rainy weather, and also when a change (not of clothing, but of weather) is imminent. There are scores of figures, and hundreds of devices to which this idea lends itself. For an advertising novelty it beats the calendar out of sight. The Hohman & Maurer Manufacturing Co. (Rochester, New York), thermometer makers for the rubber trade, will tell any reader of this just what type of figure will fit their business.

NEWS OF THE AMERICAN RUBBER TRADE.

MECHANICAL RUBBER MANUFACTURERS' ASSOCIATION.

THE organization of the Mechanical Rubber Manufacturers' Association of the United States was completed at a meeting held at the Waldorf-Astoria, in New York, on Thursday, October 6, attended by representatives of a number of the leading factories, as follows:

Boston Belting Co.=Benjamin F. Elson.
 Boston Woven Hose and Rubber Co.=Archibald M. Paul.
 Crescent Belting and Packing Co.=John J. Voorhees.
 The Diamond Rubber Co.=William B. Miller.
 The Eureka Rubber Manufacturing Co.=J. A. Lambert.
 The B. F. Goodrich Co.=Bertram G. Work.
 Gutta Percha and Rubber Manufacturing Co.=Amadee Spadone.
 Hamilton Rubber Manufacturing Co.=W. L. Blodgett.
 Lake Shore Rubber Co.=Mr. Whitehead.
 Manhattan Rubber Manufacturing Co.=Arthur F. Townsend.
 Mechanical Rubber Co. (Chicago).=D. C. Blanchard.
 Mechanical Rubber Co. (Cleveland).=M. I. Blanchard.
 New York Belting and Packing Co.=James H. Cobb.
 New York Rubber Co.=William H. Acken, Rufus A. Brown.
 Peerless Rubber Manufacturing Co.=G. S. Taylor, W. J. Courtney.
 Republic Rubber Co.=Warner Arms, L. J. Lomasney.
 Revere Rubber Co.=E. S. Williams.
 Rubber Goods Manufacturing Co.=Charles A. Hunter, Ernest Hopkinson.
 Voorhees Rubber Manufacturing Co.=John J. Voorhees.
 Whitehead Brothers Rubber Co.=Alfred Whitehead.

The meeting was called to order by Mr. Work, as chairman of the preliminary meeting reported in THE INDIA RUBBER WORLD, September 1, 1904 (page 428), and Mr. Hillman acted as secretary. The various committees named at the former meeting made their reports, which, after discussion and amendment, were adopted. The preamble to the Constitution states:

This association is formed for the purpose of fostering the interests of the manufacturers engaged in the manufacture and sale of mechanical rubber goods in the United States, reforming such abuses as exist, securing freedom from unjust and unlawful exactions; settling differences between the members of the association; and promoting a more enlarged and friendly intercourse between them.

There are to be two classes of members—active members, who must be manufacturers of mechanical rubber goods, and associate members, of whom each active member shall have the privilege of naming two, belonging to his own concern. The latter shall have the privilege of participating in discussions "but they shall have no vote other than the one vote that is invested in the active member." The officers shall be a president and vice president, and secretary and treasurer (the latter two positions being invested in one person), the same to be elected at the annual meeting on the first Thursday of October. Regular meetings shall be held on the first Thursday of October, December, February, April, and June, at times and places to be agreed upon hereafter. Special meetings may be called by the president at any time, and shall be called by him upon proper request. A majority of the active members shall constitute a quorum.

Three committees are provided for: An executive committee, and committees on grievances and specifications. Regarding the latter it is provided: "It shall be the duty of the specification committee to consider all specifications issued, pertaining to the manufacture of mechanical rubber goods, and to make such suggestions and recommendations as in their judgment seem best and to report at the regular meetings." The executive committee was elected by the association, and the other two appointed by the executive committee, it being provided that the president shall be a member *ex-officio* of all committees.

The result of the election of officers and appointment of committees is given below:

President—BETRAM G. WORK, Akron, Ohio.
Vice President—AMADEE SPADONE, New York.
Secretary-Treasurer—WILLIAM HILLMAN, New York.
Executive Committee—E. S. Williams, Boston; Ernest Hopkinson, New York; W. B. Miller, Akron; C. Edward Murray, Trenton; M. I. Blanchard, Chicago.
Grievance Committee—A. M. Paul, Boston; Warner Arms, Youngstown; J. Oliver Stokes, Trenton; John J. Voorhees, Jersey City; J. C. Butler, Chicago.
Specification Committee—C. A. Hunter, New York; J. F. McGuire, Akron; Welling G. Sickel, Trenton; B. F. Elson, New York; D. C. Blanchard, Cleveland.

It was moved that the officers of the association serve without any remuneration, except the secretary-treasurer. After a very full and free discussion of the conditions of the industry, and its future prospects, the meeting adjourned at 3.40 P. M., without date.

ANOTHER COMPANY TO MAKE TIRES.

THE Eureka Rubber Manufacturing Co. of Trenton, N. J. are installing an equipment of eleven specially constructed vehicle tire vulcanizers for the manufacture of solid and cushion carriage tires. These vulcanizers represent the most modernly effective ideas in the manufacture of this line and it is claimed should somewhat revolutionize present methods of manufacture. Tires can be produced in any lengths required up to 500 or 1000 feet, or longer. Nothing but fully guaranteed brands will be made and the company expect to add to their present enviable reputation among the carriage trade of the country as manufacturers of high grade rubber drills and duck, by turning out only thoroughly reliable and serviceable qualities in their rubber tire department. Mr. Frank Richardson, formerly president of the Sweet Tire and Rubber Co. (Batavia, New York) has been given entire charge of the tire department. His long connection with the carriage trade and extensive acquaintance with the rubber tire business, should insure the operation of this department under the most practical ideas possible. Mr. Richardson has not only been a successful rubber tire manufacturer, but previously was engaged in carriage manufacturing, so that he is more than well equipped to make a success of his new charge.

THE GOODYEAR TIRE AND RUBBER CO. (AKRON).

THE plan of reorganization of this company, which has been mentioned from time to time in this Journal [See THE INDIA RUBBER WORLD, September 1, 1904—page 430] has been fully completed. It involved the taking up the company's entire note indebtedness, for which were substituted \$245,500 in first mortgage 10 year 6 per cent. bonds, against which, it is stated, the company have assets approximating \$800,000. At the annual meeting the officers were reelected as follows:

President—L. C. MILES.
Vice President—Hon. CHARLES DICK.
Secretary—CHARLES W. SEIBERLING.
Treasurer—H. B. MANTON.
General Manager—F. A. SEIBERLING.

The directorate is composed of the above, together with A. W. Firestone and F. G. Carnahan. The Messrs. Seiberling and Mr. Manton have filled their respective positions in the management since the organization of the company, in 1898. The Hon. Charles Dick is the junior United States senator for Ohio, having been chosen to succeed the late Hon. Mark Hanna in that office.

THE DIAMOND RUBBER CO. BRANCHES.

O. J. WOODARD manager of the New York branch of the Diamond Rubber Co., has been promoted to the position of general selling representative, with headquarters in New York. Samuel F. Randolph, Jr., succeeds Mr. Woodard as manager of the New York branch, while retaining charge of the Philadelphia branch, where he has been manager since January, 1901. G. L. Bradley, who has been associated with Mr. Woodard in New York, now becomes manager of the Cleveland branch. A branch has been established at No. 3966 Olive street, St. Louis, in charge of R. L. McCrea, and another at No. 611 First avenue, south, Minneapolis, in charge of W. E. Roby.

CONSOLIDATED RUBBER TIRE CO.

THIS is a New Jersey corporation, manufacturing the Kelly-Springfield solid vehicle tires. It has filed with the commissioner of corporations of Massachusetts, as required by law of foreign corporations doing business in that state, a statement of its condition, relating to March 1, 1904, the details of which follow, compared with the figures for the preceding year:

ASSETS.		Mar. 31, '04.	Jan. 1, '03.
Tools and fixtures.....	\$	8,498	7,556
Merchandise.....		251,710	238,050
Cash and debts receivable.....		259,142	271,196
Patent rights and share capital.....		5,027,878	5,029,805
Licenses, contracts, and good will.....		2,303,030	...
Miscellaneous.....		148,467	2,436,178
Profit and loss.....		5,024	62,535
Totals.....	\$	8,003,751	\$8,045,922
LIABILITIES.			
Capital stock.....	\$	5,149,000	\$5,149,000
Accounts payable.....		3,752	43,995
Debtenture income bonds.....		2,850,500	2,850,500
Reserve.....		...	1,927
Totals.....	\$	8,003,751	\$8,045,922

AFFAIRS OF GEORGE WATKINSON & CO. (PHILADELPHIA).

RICHARD S. HUNTER, referee in the bankruptcy proceedings of George Watkinson & Co. (Philadelphia), declared a dividend of 8 per cent. in favor of the concern's creditors on October 12. It will be payable about November 1, and is the second dividend to be paid; the other, which was for 10 per cent., was paid in June last. The report of the trustee of the Watkinson estate, The Provident Life and Trust Company of Philadelphia, upon the strength of which the dividend was declared, showed the amount of cash in bank on October 10 to be \$151,817.67. From this amount was subtracted \$25,000, which is being retained for the payment of the Fargo claim and \$16,779.68, which represents the amount of the first dividend of 10 per cent. on the contested claims. This leaves a balance in actual cash of \$110,037.99. The total of the uncontested claims is \$864,501.24, on which 8 per cent. would amount to \$77,160.12. The amount of the contested claims is \$167,796.90, of which 8 per cent. amounts to \$13,423.75. This gives a total of \$90,583.87, which represents the entire second dividend. Under the heading "Unconverted Assets" there are accounts receivable to the value of \$23,000, all of which are contested claims. Then there is merchandise in the hands of H. Lane & Son amounting to \$16,000 and a claim against the United State Rubber Co. for \$15,200. It having appeared from the trustee's report of the cash in his hands that a dividend of 8 per cent will leave \$19,454.12 in the treasury, together with a sufficient sum to pay the previous and present dividends on all disputed claims, and, with certain assets not yet collected, Referee Hunter accordingly declared the 8 per cent. dividend, to be paid to the creditors from the funds of the estate.

AKRON FACTORIES TO PAY MORE FOR WATER.

THE \$200,000 appropriation made by the Ohio legislature for improving the state canal, contingent upon the receipts of the canal reaching a certain figure, it now appears will soon become available. For instance, the Akron Water Works Co. have consented to pay \$6000 a year for water from Summit lake, instead of \$1500, as heretofore, and it is understood that The B. F. Goodrich Co. and The Diamond Rubber Co., among other large consumers of water at Akron, consent to an advance in rates, in view of the advantages expected from the contemplated improvements.

THE RUBBER FOOTWEAR TRADE IN CANADA.

AT a combined meeting of the Rubber Shoe Manufacturers' and Rubber Boot and Shoe Jobbers' associations of Canada, at Toronto, on September 26, it was decided that wholesale firms handling less than \$15,000 worth of rubbers in a year shall not be eligible to the Jobbers' Association. Also, that after 1905 firms doing a combined retail and wholesale business must be recognized as retailers.—*The Canadian Shoe and Leather Journal* (Toronto) says that the past season was beyond all doubt the most successful in the history of the rubber shoe trade in the Dominion. The prolonged severe winter, with its abnormal snowfall, put the severest strain upon the capacity of production and distribution, and many dealers are asserted to have lost sales through inability to obtain supplies. The effect of these conditions has made itself felt upon the present season, and orders to date are far ahead in volume of anything in the history of the trade. The *Journal* mentions as a further reason for the satisfactory condition of trade the efforts of manufacturers and jobbers to bring about uniformity of selling methods and prices.

RUBBER FOR CANADIAN GRAIN ELEVATORS.

THE Gutta Percha and Rubber Manufacturing Co. of Toronto, Limited, recently completed an order for the belting equipment for the grain elevator of the Canadian Northern railway, at Port Arthur, Ontario, which is stated to be the largest elevator in the world. The contract was for something over 3¼ miles of belting, mostly 30 and 36 inches wide, the total weight being more than 80,000 pounds. The capacity of the elevator is 7,000,000 bushels.—*THE INDIA RUBBER WORLD*, February 1, 1900 (page 137), mentioned a conveyor belt made by this company for the International railway government elevator at St. John, N. B., and which the company at that time believed to be the largest ever made. The company have since supplied the rubber equipment for a number of grain elevators in the Dominion, some of which are very extensive.

PRESIDENT MINER'S COPPER INTERESTS.

MR. S. H. C. MINER, president of the Granby Rubber Co. (Granby, Quebec), has retired from the directorate of the Granby Consolidated Mining, Smelting, and Power Co., of which company he had been president since its inception, seven years ago. This is one of Canada's largest and most successful mining concerns, having \$13,363,030 of share capital issued, and producing lately more than 1,500,000 pounds of copper monthly. Control of the company has now passed to New York interests, who hold \$9,500,000 of the shares. The Montreal office will be closed, and the main office transferred to Grand Forks, British Columbia, with a branch in New York city. Mr. Miner presided at the annual meeting at Montreal on October 5. In announcing his retirement he expressed every confidence in the future of the company, saying that he was the largest individual shareholder, but he could not see his way clear to devoting so much time to the company's business as in the past. One of the New York directors stated that

those now in control had come up with the intention of re-electing Mr. Miner as president, and they deeply regretted his intention to retire.

NEW YORK STOCK EXCHANGE TRANSACTIONS.
UNITED STATES RUBBER CO.:

DATES.	COMMON.			PREFERRED.		
	Sales.	High.	Low.	Sales.	High.	Low.
Week ending Sep. 24	2,040	20	19 $\frac{3}{8}$	960	74 $\frac{3}{8}$	73 $\frac{1}{8}$
Week ending Oct. 1	8,285	23 $\frac{1}{8}$	19 $\frac{3}{8}$	3,870	79 $\frac{1}{8}$	74 $\frac{3}{8}$
Week ending Oct. 8	12,980	24 $\frac{1}{8}$	23	4,400	80 $\frac{1}{8}$	78 $\frac{3}{8}$
Week ending Oct. 15	30,365	30 $\frac{1}{8}$	23 $\frac{3}{8}$	10,543	85 $\frac{1}{8}$	80 $\frac{3}{8}$
Week ending Oct. 22	12,120	30	27 $\frac{3}{8}$	2,100	85	82

RUBBER GOODS MANUFACTURING CO.:

DATES.	COMMON.			PREFERRED.		
	Sales.	High.	Low.	Sales.	High.	Low.
Week ending Sep. 24	1,830	19 $\frac{1}{8}$	19	35	82 $\frac{3}{8}$	82 $\frac{3}{8}$
Week ending Oct. 1	18,590	22 $\frac{1}{8}$	19 $\frac{3}{8}$	1,180	84	81 $\frac{3}{8}$
Week ending Oct. 8	2,930	21 $\frac{3}{8}$	20	63	84 $\frac{1}{8}$	83
Week ending Oct. 15	26,570	24 $\frac{3}{8}$	20 $\frac{1}{8}$	1,930	88 $\frac{3}{8}$	83 $\frac{1}{8}$
Week ending Oct. 22	8,520	24	22	1,035	86 $\frac{1}{8}$	85

THE NEW FISK RUBBER CO.

[See THE INDIA RUBBER WORLD, September 1, 1904—page 430.]

A NEW corporation has been formed, under the laws of Massachusetts, with a capital of \$600,000, under the name of The Fisk Rubber Co., to succeed the Fisk Rubber Co., manufacturers of tires at Chicopee Falls, which has been in the hands of a receiver since October, 1903. Harry T. Dunn, general manager of the old company, is president; Alfred N. Mayo, the assignee and largest creditor, is treasurer; and Harry G. Fisk, president of the old company, clerk of the new corporation. These also form the board of directors. The capital is divided into an equal number of shares of preferred and common stock. Shareholders of the old company receive for each share, one share each of preferred and common stock in the new corporation. The creditors receive 5 per cent. in cash and 100 per cent. in new preferred stock, except that all claims less than \$100 are paid in cash. It is intended to retire \$50,000 par value of the preferred stock annually, though any part of it may be retired at any time at par and 6 per cent. interest. Preferred shareholders are entitled to 6 per cent. dividends, payable semi-annually. During the whole time that the concern has been in the hands of a receiver the business has been on a good scale, and now that ample capital is assured the new company feel that the prospects are good for the future. Already extensive additions have been made to the manufacturing plant, which it is expected will double its capacity. A new building is under way, four stories, brick, 120 x 50 feet, beside an addition to the boiler house, 25 x 35 feet, to accommodate two extra boilers. It is anticipated that the additions will be completed, equipped, and fully running by January 1. The company announce that the management will be practically the same as in the past, and the line of manufacture will remain unchanged—pneumatic bicycle, carriage, and automobile tires.

PHILADELPHIA RUBBER WORKS TO BUILD.

THE Philadelphia Rubber Works have awarded a contract for extensive building operations at Schoolkill avenue and Reed street, Philadelphia—a site recently purchased from the bankrupt Watkinson company for more than \$100,000—which will represent a total expenditure of upward of \$250,000. The present building on the grounds, which was long used by the Watkinson company for the manufacture of rubber shoes and

boots, is a two-story affair, 120 x 150 feet. This is to be entirely remodeled on modern lines, and equipped with up-to-date machinery. In addition, a boiler house will be constructed of fireproofing material, which will be 29 x 86 feet. In this building will be installed boilers capable of generating 1500 HP. There are also to be erected an engine and pump house 48 x 56 feet, a mill 60 x 120 feet, and devulcanizing building 49 x 58 feet. Both the mill and the building to be used for devulcanizing purposes will each be three stories in height. The girders will be of slow burning mill construction, and will be put through a special fireproofing test before being installed. Brick tower fire escapes will be features of each of the buildings, and in addition automatic sprinklers will be installed on all floors. William Steele & Sons have the contract and work is to begin at once.

THE DIAMOND RUBBER CO. (AKRON, OHIO).

At the annual meeting of this company, on October 11, the reports presented indicated that a good year's business had been done. The board of directors elected consists of F. A. Hardy, A. H. Marks, W. B. Miller, A. H. Noah, Ohio C. Barber, J. K. Robinson, and R. C. Lake. Mr. Lake, who is a resident of Chicago, is the only new member of the board, having been chosen to succeed Walter B. Hardy, now residing in London. The officers were re-elected, as follows:

President—F. A. HARDY.

Vice President and Superintendent—A. H. MARKS.

Secretary—W. B. MILLER.

Treasurer—A. H. NOAH.

On October 24 work was commenced on an important addition to the company's office building. It is to be a brick structure, two stories high, and about 50 x 80 feet, adjoining the present offices on Falor street.

UNITED STATES RUBBER CO.—DIVIDEND.

THE directors, at a meeting in New York on October 6, declared a dividend of 1 $\frac{1}{2}$ per cent. on the preferred shares of the company, from the net earnings of the fiscal year beginning April 1, 1904, payable December 15 to shareholders of record November 30. The amount to be disbursed is \$352,882.50. This is the second 1 $\frac{1}{2}$ per cent. dividend declared out of this year's earnings, and the third declared since the resumption of dividends, last spring. A statement given out by the company is that the net earnings for the first half of the fiscal year (those for September being partially estimated) were \$2,055,941.43, leaving a surplus, after paying the two dividends, of \$1,350,176.43. Last year the net earnings for the first six months were stated at \$884,011.—It is reported that plans have been completed for retiring \$2,000,000 of the funding 5 per cent. notes of the United States Rubber Co., due March 15 next, and the extension of the remaining \$8,000,000 of the issue of March, 1902, for 3 $\frac{1}{2}$ years.—The General Rubber Co., incorporated in New Jersey March 24, 1904, to engage in trading in crude rubber, and which is controlled by the United States Rubber Co., has been actively establishing connections with primary markets. Its formation has been part of the plan of the manufacturing company for the more direct buying of its raw materials. The board of directors of the General Rubber Co., the capital of which is \$2,000,000, is now as follows: Samuel P. Colt (president), Lester Leland (vice president), John J. Watson (treasurer), Andrew H. Brown (assistant treasurer), William M. Ivins, E. C. Benedict, James P. Deshler, Walter S. Ballou, and James B. Ford.—The yacht *Virginia* has been chartered by a party who will sail from New York about the middle of November and proceed up the Amazon as far as Manáos. The party will be headed by Mr. E. C. Benedict, who is a director in the United States Rubber and General Rubber

companies, and it is understood that the trip bears a relation to the extension of their trade in crude rubber. Mr. Benedict informed THE INDIA RUBBER WORLD that it had not been fully decided who would compose the party.

MORE COMMERCIAL PACIFIC CABLE CAPITAL.

THE stockholders of the Commercial Cable Co. were notified on October 5 that \$1,000,000 unissued capital of the company would be offered to them. The money will be used to complete the Commercial Pacific cable between Manila and Shanghai. Application was made recently to the New York Stock Exchange to list the securities of the Mackay companies.

NEW INCORPORATIONS.

THE Fisk Rubber Co. (Chicopee Falls, Mass.), September 30, 1904; under Massachusetts laws; capital authorized, \$600,000. Incorporators: Alfred N. Mayo, Harry G. Fisk, and Harry T. Dunn—all of Springfield, Mass. Further details are given in another column.

=A certificate purporting to incorporate, under the laws of the District of Columbia, the Catasaqua Rubber Co., was filed in the office of the recorder of deeds at Washington, July 21, 1904, the capital stock being stated therein to be \$500,000, divided into an equal number of preferred and common shares, of the par value of \$10. Local newspapers report the purchase by Philadelphia parties, from the receiver of the Wolfe-Engbert Composite Metal Co., of their large plant at East Catasaqua, Pennsylvania, the same to be used for the manufacture of rubber tires, carriage cloth, and waterproof clothing. The officers of the rubber company are stated to be: James Regnery, Easton, Pa., president; William MacDonald, Allentown, Pa., vice president; the Hon. Hugh E. Crilly, Allentown, secretary and treasurer; J. W. Kenevel, Philadelphia, superintendent.

=The Brantford Felt and Rubber Co., Limited, announced in the Ontario *Gazette*, October 8, 1904; capital, \$100,000. Provisional directors: John F. Martin, John Percival Bell, Frederick W. Frank, Joseph Henry Hum, and Robert E. Ryerson. The object is to manufacture rubber and felt footwear. Brantford is well adapted for manufacturing purposes, and is located in Ontario, westward from the port of Hamilton.

TRADE NEWS NOTES.

THE Milford Rubber Co. (Milford, Massachusetts) have received and are installing the calendar which was mentioned in THE INDIA RUBBER WORLD for July—the latest Birmingham make, three roll, 60" X 22". They are now in a position to handle all kinds of heavy and light drills and sheetings, and will make a specialty of bellows and melodeon cloths.

=The Republic Rubber Co. (Youngstown, Ohio), have recently opened in Cincinnati a branch house to handle exclusively their product in solid rubber carriage tires. It will be in charge of Melville Ritchie, who is well known to the carriage trade throughout the West. The store is located at No. 856 West Sixth street, where will be carried a large stock of tires to supply the trade in Cincinnati and adjacent territory.

=The Eureka Fire Hose Co. (New York) desire to have published a denial of a rumor relative to a change in the agency of the company at Chicago. They announce that "Messrs. W. H. Salisbury & Co. who have handled the product of the Eureka Fire Hose Co. for so many years with marked success, will continue to be their only representatives at Chicago, and it is hoped, will remain indefinitely in control."

=Bowers Rubber Co. (San Francisco) have been awarded a contract for supplying the city of Fresno, California, with 2000 feet of 2½ inch rubber lined cotton fire hose, for which bids were opened on September 19.

=The Gorham Rubber Co. (San Francisco) have installed at

their Los Angeles branch—No. 326 Main street—a complete vulcanizing plant for repair work on automobile tires, involving the latest improvements in this line. The Gorham company are Pacific coast managers for The B. F. Goodrich Co., and carry a stock of the latter's tires.

=The factory of the Goodyear Rubber Co. at Middletown, Connecticut, has been running overtime of late, and it is reported that at no past date has there been so much business in hand as now.

=James F. Grady, of New Haven, Connecticut, for some years past connected with the Edward Malley Co., of that city, will go to Chicago as manager of the Seamless Rubber Co.'s branch there.

=Mr. Samuel H. Cable has accepted a position with the Neponset Rubber Co. (Hyde Park, Massachusetts) and will have charge of the manufacture of carriage cloth bearing the "Cable" brand.

=The local newspapers report that times were never before so good as at present at the Woonsocket and Millville factories of the Woonsocket Rubber Co. There are 1400 employes at work at the former and 800 at the latter plant.

=George H. Edwards has resigned as superintendent of the insulated wire department of the National India Rubber Co. (Bristol, Rhode Island), to accept a position with Ostby & Barton, jewelers, of Providence.

=Edward Z. Jefferson—No. 7 Wood street, Pittsburgh, Pennsylvania—announces to the trade that he has become connected with the Quaker City Rubber Co. (Philadelphia), as manager of their Railroad department.

=Suit for \$10,000 damages has been brought against the Western Rubber Co. (Goshen, Indiana) by Harvey Stork, a former employe, for injuries to both hands sustained while at work in the company's factory.

=Basil S. Courtney, general sales manager, at No. 1679 Broadway, New York, for the tires of The Fawkes Rubber Co. (Denver, Colorado), has taken, in addition, the agency for the tire and mechanical goods products of The Milwaukee Rubber Works Co. (Cudahy, Wisconsin). The latter company are now manufacturing the Fawkes tires.

=The report printed in this department in the last issue of THE INDIA RUBBER WORLD, to the effect that W. H. Salisbury & Co. (Chicago) had taken on the account of the Pennsylvania Rubber Co., though reaching us through a supposedly reliable source, proves to have been incorrect, and its publication is regretted.

=The Independent Rubber Co., No. 129 East Columbia street, Fort Wayne, Indiana, wholesalers of rubber boots and shoes, carry exclusively the Hood Rubber Co.'s brands. A force of ten is employed in the house, together with an equal number of travelers in Indiana, Ohio, and Michigan. The business has been established three years and is owned by Isidor Lehman and Sol Karn—two energetic young men, supplied with ample capital.

=Mr. W. C. Coleman, of W. C. Coleman Co. (Setauket, Long Island) spent the first part of the month at the World's Fair, at St. Louis. While the company were damaged by the recent fire at Setauket, no interruption to business will result. Some of their machinery was destroyed, but the stock of scrap rubber happened to be stored in a warehouse isolated from the factory plant—one of the few structures on the ground not burned.

=The first snowfall of the season in northern New York—reported from Albany, Schenectady, Glens Falls, Saratoga, and Catskill, on October 12—occurred earlier than usual, which is an encouraging indication for the rubber shoe trade.

=A. W. Brunn (Nos. 2-4 Stone street, New York), formerly representative of the late firm of Kramrisch & Co. (Liverpool), has been appointed exclusive selling agent for the United States and Canada by Fred. Stern & Co. (Liverpool), importers of crude rubber, making a specialty of African grades, and V. Chautard & Christensen (London), importers of and dealers in crude rubber of all grades.

=There was filed with the secretary of state of Connecticut, on October 20, a certificate of the final dissolution of the Rubber Manufacturers' Selling Co., of Colchester. This company was organized in 1889 by George Watkinson, in connection with the Colchester Rubber Co., and incorporated in 1891, with \$300,000 capital. It was transferred to the United States Rubber Co. in August, 1893, with the Colchester company.

=C. E. W. Woodward, who has been assistant superintendent at the factory of The Fisk Rubber Co. (Chicopee Falls, Massachusetts) since its beginning, has resigned to engage in other business, and will be succeeded by G. H. T. Babbitt.

=In re Victor Rubber Co. (Springfield, Ohio)—the old company by that name—Frank Krupp, referee in bankruptcy, has made a report to the United States court, to the effect that no fraud is shown in the conduct of the company prior to its insolvency, as charged. The charge was made by the Erie Railroad Co., which delivered \$10,000 worth of crude rubber to the company's factory, consigned by a New York house, "C. O. D." The delivery, by some means, was completed without payment being made, and the railroad became responsible for the rubber. The rubber company claimed to have received the rubber in good faith, not knowing that it was a "C. O. D." shipment. It was in regard to this matter that the decision by Referee Krupp was asked. The railroad company's claim will not have preference over those of other creditors. The railroad company has appealed from this decision.

=The Monarch Rubber Co. (Brockton, Massachusetts) has been succeeded by the Brockton Rubber Co. which includes most of the former stockholders and several new ones, and the plant is being put into shape for operation at an early date.

=Suit has been filed in the Akron (Ohio) court of common pleas by several banks, to have set aside certain conveyances of property made by George W. Crouse, prior to his being declared a bankrupt some time ago, it being alleged that the same were made with intent to defraud his creditors. The property so conveyed includes shares in a number of corporations, including The B. F. Goodrich Co.

=The city of Winnipeg, Manitoba, was visited on the night of October 11 by the most disastrous fire in its history, resulting in the destruction of an important business section. In answer to an inquiry, THE INDIA RUBBER WORLD is informed that The Winnipeg Rubber Co., Limited, did not suffer in any way. Their premises were two or three blocks from the area of the fire, which, fortunately, was checked before reaching the rubber store.

=The plant formerly operated by the Standard Rubber Co. (Campello, Massachusetts) is reported to have been purchased by Rufus C. Maltby, of New York, together with the land occupied by it, but it is not stated what the objects of the purchaser may be.

=The Rubber Workers' Union at Trenton, New Jersey, recently adopted resolutions asking all union men to use their influence and votes against Edward C. Stokes, the Republican candidate for governor at the forthcoming. Mr. Stokes was formerly treasurer of the United and Globe Rubber Manufacturing Cos., of Trenton. The rubber workers claim that he resigned because he did not care to become involved in the strike in the rubber factories last winter, which was lost by the

union. The resolution of the Rubber Workers' Union was later affirmed by the Central Labor Union of Trenton.

=The United States Agency Michelin Tire Co. (New York) has been notified of the award, at the St. Louis World's Fair, of a grand prize for its display of Michelin pneumatic tires.

=The Singer Manufacturing Co. (New York) made 292 distinct entries of their sewing machines, in 14 groups of exhibits, at the St. Louis World's Fair. The international jury gave them seven grand prizes, one of them being for machines for stitching rubber, leather and canvas belting, shown in Group 35.

=The Eureka Fire Hose Co. (New York) have been advised that their "Eureka," "Paragon," and "Red Cross" brands of seamless rubber lined fire hose have been awarded a gold medal at the St. Louis World Fair.

PERSONAL MENTION.

MR. ADOLPH PRINZHORN, director of the Continental Caoutchouc- und Guttapercha-Compagnie (Hanover, Germany), was in attendance at the St. Louis World's Fair, and favored THE INDIA RUBBER WORLD office with a visit while in the States.

=Dr. Alberto Pirelli, of the important rubber and cable firm of Pirelli & Co. (Milan, Italy), whose presence in the United States was mentioned lately in THE INDIA RUBBER WORLD, on leaving the country took a steamer for Manáos, with a view to seeing the rubber business on the Amazon at close range before returning to his home. The Messrs. Pirelli have imported direct from Brazil a good deal of the rubber used by them lately.

=Prior to the republican state convention in Rhode Island on October 12, in view of a widely expressed intention to nominate for the office of governor Colonel Samuel P. Colt, president of the United States Rubber Co., that gentleman published a letter of considerable length, stating his entire confidence that the party would win the forthcoming election, but that his obligations of a business nature were such that he could not feel justified in neglecting them to accept a public office. —One of the nominees of the convention was Mr. Walter A. Read, a director of the Woonsocket Rubber Co., who is named for reelection for general treasurer.

=Señor Don Cayetano Romero, who has been appointed Mexican consul general at New York, after having filled a similar position at San Francisco, is a brother of the late Matias Romero, who died while Mexican ambassador at Washington, and whose interest in rubber culture in Mexico undoubtedly did much to encourage investments in that field.

=Memorial services for the late Hon. Elisha S. Converse were held on the evening of October 27, by Converse lodge of Masons, of Boston, which was named in honor of Mr. Converse.

=Mr. Lester Leland, treasurer of the Boston Rubber Shoe Co., with Mrs. Leland, has planned a trip to the Mediterranean and the Nile, sailing from New York about November 8.

=Mr. Frank Poel, of Poel & Arnold (New York), who has been in Europe for the last three or four months, is due to arrive at home at about the date of the publication of this issue.

=Mr. William Symington, of the crude rubber firm of Alden, Symington & Co., London and Liverpool, was a recent visitor to the States.

=Mr. William F. Bowers, president of the Bowers Rubber Co. (San Francisco) has been spending a few weeks in the Atlantic states, including a visit to his native city, Lynn, Massachusetts.

=Mr. Harold Waldo French, of Akron, Ohio, was married on October 17, to Miss Margaret Emerson, daughter of Mr. and Mrs. Samuel Gaunett, of Milton, Massachusetts. Mr. French is the representative at Akron of George A. Alden & Co., in the crude rubber trade.

=General S. Duncan Oliphant, clerk of the United States circuit court at Trenton, New Jersey, died October 23, in his eighty-first year. He was the father of the late Alexander C. Oliphant, who, at his death in 1902, was treasurer of The United and Globe Rubber Manufacturing Cos. (Trenton) and adjutant general for New Jersey.

=Mr. D. Lorne McGibbon, general manager of the Canadian Rubber Co. of Montreal, was among recent visitors to the office of THE INDIA RUBBER WORLD.

=Barton Parker, until recently advertising manager of the Hartford Rubber Works Co., has accepted a similar position with the Olds Motor Works (Detroit, Michigan).

=Mrs. Amelia Godfrey, widow of James W. Godfrey, who was sales manager for The India Rubber and Gutta Percha Insulating Co. (New York) at the time of his accidental death, in November, 1901, has obtained a verdict for \$30,000 in a suit against the City of New York, having proved that her husband's death was due to negligence with respect to the condition of the street through which he was driving when the accident occurred.

A TRIBUTE TO THE LATE MR. ALDEN.

AT a meeting of the Rubber Sundries Manufacturers' Association held in New York, October 13, 1904, the following resolution was unanimously passed:

Resolved, that in the death of George A. Alden, Esq., the President of the Seamless Rubber Co. (New Haven, Conn.), this Association desires to express its sympathy with the Seamless Rubber Co., in their great loss, and,

Resolved, that this resolution be spread upon the minutes of this meeting and a copy of the same be sent to the officers of the Seamless Rubber Co.

Rhodes Lockwood and F. H. Jones, members of the Association, were appointed a committee to attend the funeral of Mr. Alden.

REVIEW OF THE CRUDE RUBBER MARKET.

THE advance in Pará sorts to be recorded at this time represents a recovery of practically 50 per cent. of the net decline which occurred during September, as reported in our last issue. The advance in Africans and Centrals, while less marked, is substantial. The market for all sorts shows a condition of firmness at this time, which is strengthened to a degree by the statistical position, arrivals at Pará up to date being hardly up to the average. The Amazon river output (including Caucho) at last advices, compares with the same months of previous years as follows:

	1901.	1902.	1903.	1904.
July	1260	1290	1280	1240
August	1290	1370	1230	1250
September	1940	1670	2010	1810
October	2640	2280	2440	2460
Total, four months	7130	6610	6960	6760

[a To October 28, 1904.]

Imports into the United States continue on a large scale. Official statements for the nine months ending September 30 for three years past are as follows:

	1902.	1903.	1904.
Pounds	37,610,569	42,898,168	41,553,345
Import Value	\$18,118,144	\$26,389,072	\$30,864,340

The condition of the industry is not all that could be desired, the factories in some branches running light. Others, however, report a normal amount of business, and the footwear manufacturers are working to their full capacity. In another

SMOKING RUBBER IN AFRICA.

TO THE EDITOR OF THE INDIA RUBBER WORLD: Mr. A. D. Thornton, of the Canadian Rubber Co. of Montreal, in his letter published in your issue of October 1 (page 3) opens a very interesting question about the coagulation of *latex* in Africa. His letter ends by the phrase: "It would seem that if a good red Upper Congo milk is cured in the same way as Pará, better results would be obtained."

Of the numerous attempts in the Congo to coagulate *Landolphia* vine *latex* by the Pará smoking process, I don't know one which has proved successful. In almost every district trials have been made, not only with *Landolphia* vine, but also with the "Ireh" and the *Kickxia* tree *latex*, and always without any practical result, as the stuff obtained had no elasticity.

Some time ago I had to report on Gold Coast rubber which had been coagulated by the Pará smoking process; the stuff had a splendid appearance, having the color and even the smell of fine Pará, but as far as elasticity was concerned it was absolutely worthless, and was not much better than Accra or Grand Bassam paste. This rubber had been obtained from the *Funtumia elastica* tree.

It is a curious fact to observe that as far as Africa is concerned the smoking process has been a failure on account of the lack of elasticity. Of course many kinds of African rubbers are smoked, but this is to help the drying, the smoking taking place after the *latex* has been coagulated.

G. VAN DEN KERCKHOVE.

Brussels, October 10, 1904.

A CLEAN COURT ROOM.—The new rubber tile floor in the large Criminal Court room has been attracting much attention. It has been found to be even better than a good substitute for carpet and enables the employés of the building to keep the room cleaner than any of the other courts.—*Pittsburgh Press*.

column is a review of the cotton goods market, the condition of which has an important bearing upon the rubber industry.

The reports of the English market, on another page, are to be supplemented by later advices, to the effect that prices are slightly higher, with supplies very light, and the condition of the market firm.

Following is a statement of prices of Pará grades, one year ago, one month ago, and on October 31—the current date.

PARÁ.	Nov. 1, '03.	Oct. 1, '04.	Oct. 31.
Islands, fine, new	97@ 98	108@ 109	112@ 113
Islands, fine, old	@	none here	none here
Upriver, fine, new	102@ 103	110@ 112	115@ 116
Upriver, fine, old	104@ 105	112@ 114	none here
Islands, coarse, new	57@ 58	60@ 62	64@ 65
Islands, coarse, old	@	none here	none here
Upriver, coarse, new	82@ 83	86@ 87	88@ 89
Upriver, coarse, old	@	none here	none here
Caucho (Peruvian) sheet	63@ 64	67@ 68	67@ 68
Caucho (Peruvian) ball	72@ 73	76@ 77	77@ 78

The market for other sorts in New York, showing a general advance, is as follows:

AFRICAN.		CENTRALS.	
Sierra Leone, 1st quality	92 @ 93	Esmeralda, sausage	78 @ 79
Massal, red	92 @ 93	Guayaquil, strip	67 @ 68
Benguella	70 @ 71	Nicaragua, scrap	75 @ 76
Cameroon ball	63 @ 64	Panama, slab	59 @ 60
Accra flake	34 @ 35	Mexican, scrap	74 @ 75
Lopori ball, prime	93 @ 94	Mexican, slab	59 @ 60
Lopori strip, prime	87 @ 88	Mangabeira, sheet	47 @ 48
Ikelemba	94 @ 95	EAST INDIAN.	
Madagascar, pinky	82 @ 83	Assam	89 @ 90
		Borneo	@

Late Pará cables quote:

	Per Kilo.		Per Kilo.
Islands, fine.	68800	Upriver, fine.	88000
Islands, coarse.	68400	Upriver, coarse.	58700

Exchange, 12 $\frac{1}{2}$ d.

Last Manáos advices:

Upriver, fine.	78800	Upriver, coarse.	58300
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Exchange, 12 $\frac{1}{2}$ d.

NEW YORK RUBBER PRICES FOR SEPTEMBER (NEW RUBBER).

	1904.	1903.	1902.
Upriver, fine.	1.09@1.21	1.00@1.10	74 @78
Upriver, coarse.	85@ 91	79@ 91	59 @62
Islands, fine.	1.07@1.16	97@1.08	71 @75
Islands, coarse.	59@ 67	60@ 70	46 @48
Cametá, coarse.	60@ 66	61@ 68	47 @50

In regard to the financial situation, Albert B. Beers (broker in India-rubber, No. 68 William street, New York), advises us:

"During October the money market has continued about the same as at the end of September, being fairly firm with 5 @ 6 $\frac{1}{2}$ per cent. ruling for the various grades of rubber notes."

Statistics of Para Rubber (Excluding Caucho).

	NEW YORK.		Total	Total	Total
	Fine and Medium.	Coarse.	1904.	1903.	1902.
Stocks, August 31. tons	85	8 =	93	168	221
Arrivals, September.	427	264 =	691	954	897
Aggregating.	512	272 =	784	1122	1118
Deliveries, September.	474	266 =	740	1025	920
Stocks, September 30..	38	6 =	44	97	198

	PARÁ.			ENGLAND.		
	1904.	1903.	1902.	1904.	1903.	1902.
Stocks, August 31. tons	360	120	97	260	650	1525
Arrivals, September.	1741	1980	1640	593	590	719
Aggregating.	2101	2100	1737	793	1240	2244
Deliveries, September.	1728	1860	1651	575	1000	969
Stocks, Sept. 30..	373	240	86	218	240	1275

	1904.	1903.	1902.
World's visible supply, September 30. tons	1463	1719	2595
Para receipts, July 1 to September 30.	3951	4500	3962
Para receipts of Caucho, same dates.	349	415	368
Afloat from Pará to United States, Sept. 30..	303	492	420
Afloat from Pará to Europe, September 30..	525	650	616

Ceylon Rubber.

EXPORTS of cultivated rubber, mostly Pará variety, from Ceylon, from January 1 to September 26, 1904:

To Great Britain. pounds	40,610
" Germany.	6,006
" Australia.	332
" Belgium.	111
" United States.	63
" Holland.	15
" Other Countries.	179
Total, nine months.	47,316
Total, same months of 1903.	20,601

Rubber Scrap Prices.

NEW YORK quotations—prices paid by consumers for car-load lots, in cents per pound—show a slight advance in respect to old boots and shoes:

Old Rubber Boots and Shoes—Domestic.	5 $\frac{1}{2}$ @ 5 $\frac{1}{2}$
Do —Foreign.	5 @ 5 $\frac{1}{2}$
Pneumatic Bicycle Tires.	3 $\frac{1}{2}$ @ 4
Solid Rubber Wagon and Carriage Tires.	6
White Trimmed Rubber.	8 $\frac{1}{2}$ @ 8 $\frac{1}{2}$
Heavy Black Rubber.	4
Air Brake Hose.	2 $\frac{1}{2}$ @ 2 $\frac{3}{4}$
Fire and Large Hose.	1 $\frac{1}{2}$ @ 1 $\frac{1}{2}$
Garden Hose.	1 $\frac{1}{2}$ @ 1 $\frac{1}{2}$
Matting.	3 $\frac{1}{2}$ @ 1

Bordeaux.

IMPORTS OF RUBBER—JANUARY TO SEPTEMBER.

	1903.	1904.
January. kilos	66,864	54,550
February.	95,007	109,025
March.	119,582	94,615
April.	97,641	121,560
May.	104,098	91,125
June.	63,473	65,060
July.	50,215	72,220
August.	151,110	208,185
September.	103,450	87,400
Total.	851,440	963,740

Antwerp.

TO THE EDITOR OF THE INDIA RUBBER WORLD: In the sale by inscription which took place on the 14 instant, 412 tons were offered, of which 378 tons were sold at somewhat irregular prices, showing however on the average, an advance on valuations of 1 to 2 per cent. Since then 39 tons have been taken out of the market, among which we may mention 15 tons Upper Congo Lac Leopold II.

The next large sale by inscription in which about 330 tons will be offered, takes place on November 11. The steamer *Leopoldville* has just arrived from the Congo, with about 359 tons.

C. SCHMID & CO., SUCCESEURS.

Antwerp, October 18, 1904.

ANTWERP RUBBER STATISTICS FOR SEPTEMBER.

DETAILS.	1904.	1903.	1902.	1901.	1900.
Stocks, Aug 30. kilos	602,495	319,986	756,401	684,355	1,056,124
Arrivals in Sept.	772,200	455,762	470,084	887,256	417,050
Congo sorts	632,293	442,435	429,855	871,360	359,232
Other sorts	139,907	13,327	40,229	15,896	57,818
Aggregating.	1,374,695	775,748	1,226,485	1,571,611	1,473,174
Sales in September.	570,213	353,890	769,774	675,468	468,412
Stocks, Sept. 30..	804,482	421,858	456,711	896,143	1,004,762
Arrivals since Jan. 1	4,481,821	3,782,156	4,028,920	4,726,126	4,584,468
Congo sorts	3,701,549	3,413,763	3,725,404	4,382,866	3,866,145
Other sorts.	780,272	368,393	303,516	343,270	718,323
Sales since Jan. 1.	4,288,239	4,018,403	3,986,918	4,443,932	3,871,697

RUBBER ARRIVALS AT ANTWERP.

SEPT. 27.—By the *Anversville*, from the Congo:

Bunge & Co. (Société Générale Africaine) kilos	140,000
Do (Société Anversoise)	51,000
Do (Sultanats du Haut Obangi)	12,000
Société A B I R.	23,000
Société Equatoriale Congolaise. (Société L'Ikelemba)	4,000
Comptoir des Produits Coloniaux. (Cie. de la N'Goko)	2,500
Do (Ekela Kadei Sangha)	25,000
Do (Caoutchouc Renard)	1,000
Charles Dethier. (Société Belgika)	1,000
M. S. Cols. (Mr. D'Heygere)	1,000
Société Coloniale Anversoise. (La Lulonga)	12,000
L. & W. Van de Velde. (Cie. du Kasai)	80,000
Edmond Van Steensel.	
Do (Cie. Bruxelloise du Haut Congo)	6,000
Société Coloniale Anversoise. (Belge du Haut Congo)	4,000
Do (Cie. de Lomami)	19,000
Do (Sud Kamerun)	4,000
	385,500

SPECIAL NOTICES.

GERMAN TECHNICAL ENGINEER, University education, special knowledge of chemistry, for years Manager on the Continent of Soft and Hard India-rubber Works, Asbestos Works, and Cable Telegraph Works, desires a similar position. Specially expert mixer of all kinds of India-rubber compounds and insulation compounds. Address GERMAN RUBBER, care of THE INDIA RUBBER WORLD. [668]

SUPERINTENDENT.—Wanted a strictly first-class Superintendent for Druggists' Sundries Department in a large factory; one thoroughly familiar with compounds and making up. Must be capable of taking full charge of manufacturing end of business. Write fully, giving experience, references, etc. Address D. S., care of THE INDIA RUBBER WORLD. [669]

OCT. 18.—By the *Leopoldville*, from the Congo:

Bunge & Co..... (Société Générale Africaine) kilos	167,000
Do (Société Anversoise)	21,000
Do (Sultanats du Haut Obangi)	18,000
Do (Société Isangi)	4,000
Do (Chemins de fer Grand Lacs)	4,000
Do (Cie. du Kasai)	56,000
Do (Société "La Kotto")	2,000
Société A B I R.....	21,000
Société Coloniale Anversoise. (Belge du Haut Congo)	6,000
Do (Cie. de Lomami)	11,000
Charles Dethier..... (La Haut Sangha)	9,000
Do (La M' Poko)	10,000
G. & C. Krellinger..... (La Lobay)	2,000
Société Générale de Commerce..... (Alimaïenne)	6,000
Comptoir Commercial Congolais.....	21,000
Divers.....	1,000 359,000

MONS. A. SCHEIBLER, manager of the Crude Rubber department of the Company for General Trade, Limited (Antwerp), has been traveling in the United States of late, studying the conditions of the rubber industry there. The importance of the consumption in America of Congo rubbers renders of special interest to the Antwerp houses the development of the industry on the western side of the Atlantic.

London.

EDWARD TILL & Co. [October 1] report stocks:

	1904.	1903.	1902.
LONDON { Pará sorts..... tons	—	—	—
{ Borneo.....	52	14	128
{ Assam and Rangoon.....	4	5	12
{ Other sorts.....	488	178	361
Total.....	544	197	501
LIVERPOOL { Pará.....	220	243	1273
{ Caucho.....	212	31	111
{ Other sorts.....	690	395	579
Total, United Kingdom.....	1666	866	2464
Total, September 1.....	1508	1364	2731
Total, August 1.....	1764	1781	3053
Total, July 1.....	1920	2285	3595
Total, June 1.....	1667	2248	3687

PRICES PAID DURING SEPTEMBER.

	1904.	1903.	1902.
Pará fine, hard.. 4/ 8 1/2 @ 4/ 11 1/2 4/ 2 @ 4/ 5 1/2			3/ 1 1/2 @ 3/ 4
Do soft..... 4/ 8 1/2 @ 4/ 11 1/2 4/ 2 @ 4/ 7 1/2			
Negroheads, scrappy 3/ 7 1/2 @ 3/ 10 3/ 3 1/2 @ 3/ 8 1/2			2/ 7
Do Cameté 2/ 7 1/2 @ 2/ 9 2/ 10 1/4			2/
Bolivian..... 4/ 9 @ 5/ 0 1/2			
Caucho ball..... 3/ 2 1/2 @ 3/ 5 1/2 3/ 3 1/2 @ 3/ 7 1/2			2/ 5 @ 2/ 6
Do slab..... 2/ 9 1/2 @ 2/ 10 2/ 7 1/2 @ 2/ 10 1/2			2/ 1 1/2 @ 2/ 2 1/2
Do tails..... No sales 3/ 1 @ 3/ 1 1/2			No sales

HECHT, LEVIS & KAHN, London and Liverpool, report [September 30]:

Mr. Felix Dorn, who has been connected with our firm during the last 17 years, having received a very favorable offer from friends in another trade, we feel that we ought not to stand in his way, and have therefore reluctantly agreed to terminate his engagement from this date. Consequently from to-day Mr. Dorn ceases to represent or sign our firm. Our best wishes accompany Mr. Dorn in his future career.

Mr. Dorn is a native of Saxony; after gaining a business experience in Berlin, he became identified with the British woolen trade; in 1887 he entered the Liverpool office of Hecht, Levis & Kahn, where, for a number of years, he has been joint representative of the firm.

OCTOBER 14.—The market for Pará sorts has been firm and dearer,

PARA RUBBER VIA EUROPE.

	SEPT. 26.—By the <i>Umbria</i> =Liverpool:
A. T. Morse & Co. (Coarse).....	22,500
Wallace L. Gough (Coarse).....	2,500 25,000
SEPT. 28.—By the <i>Yucatan</i> =Colon:	
Chicago Bolivian Rubber Co. (Fine).....	23,000
OCT. 1.—By the <i>Campania</i> =Liverpool:	

A. T. Morse & Co. (Coarse).....	16,000
Poel & Arnold (Coarse).....	3,000 19,000
OCT. 10.—By the <i>Cedric</i> =Liverpool:	
A. T. Morse & Co. (Coarse).....	11,500
OCT. 12.—By the <i>Oceanic</i> =Liverpool:	
Poel & Arnold—(Medium).....	53,000
OCT. 15.—By the <i>Lucania</i> =Liverpool:	
Poel & Arnold (Fine).....	8,500

but on the spot there has been little fine hard, and only small sales have been made up to 4s. 10 1/2 d. November deliveries sold at 4s. 8d. @ 4s. 9d.; December at 4s. 7d. @ 4s. 7 1/4 d.; January at 4s. 6d., and buyers. Bolivian firmly held; fine quoted at 4s. 11d. Mollendo: Small sales of fine on the spot at 4s. 8 1/2 d. down to 4s. 7d. for delivery, and Beni Bolivian at 4s. 9d. afloat. Medium grades in to-day's auctions were in small supply, which met a fair demand for the better qualities at steady prices.

Plantation Rubber.—Eight cases Straits offered and sold, fine biscuits at 5s. 4d. @ 5s. 4 1/2 d., thick ditto rather immature at 5s. Two cases fine Ceylon biscuits sold at 5s. 4d.

Balata.—One hundred and sixty-four packages offered and 20 sold; Sheet mixed Pile 1 and 2 at 1s. 8d. @ 1s. 9d. Pile 2 part very thick at 1s. 3d., and Block at 9d.

Rubber Receipts at Manaos.

DURING September and three months of the crop season for three years [courtesy of Messrs. Witt & Co.]:

FROM—	1904.	1903.	1902.	1904.	1903.	1902.
Rio Parú—Acre..... tons	403	429	271	909	886	768
Rio Madeira.....	193	263	188	672	755	735
Rio Juruá.....	190	254	227	215	256	230
Rio Javary—Iquitos.....	68	71	55	281	185	155
Rio Solimões.....	32	59	114	42	84	163
Rio Negro.....	3	—	44	3	15	65
Total.....	889	1076	899	2122	2181	2116
Caucho.....	40	133	43	218	341	259
Total.....	929	1209	942	2340	2522	2375

IMPORTS FROM PARÁ AT NEW YORK.

[The Figures Indicate Weights in Pounds.]

October 4.—By the steamer *Dunstan*, from Manáos and Pará:

IMPORTERS.	Fine.	Medium.	Coarse.	Caucho.	Total.
Poel & Arnold.....	68,200	42,100	66,400	1,300=	178,000
General Rubber Co.....	90,100	15,100	43,500	.....=	148,700
New York Commercial Co.....	71,000	20,100	38,000	500=	129,600
A. T. Morse & Co.....	7,400	.....	115,000	4,500=	126,900
Edmund Reeks & Co.....	14,700	5,000	3,300	.....=	23,000
Hagemeyer & Brunn.....	11,400	1,700	2,700	.....=	15,800
Lionel Hagenauers & Co.....	6,800	.....	1,800	.....=	8,600
G. Amsinck & Co.....	300	800	.....	.....=	1,100
Total.....	269,900	84,800	270,700	6,300=	631,700

October 14.—By the steamer *Maranhense*, from Manáos and Pará:

New York Commercial Co.....	82,700	50,000	40,300	3,000=	176,000
General Rubber Co.....	83,400	21,700	54,700	1,200=	161,000
A. T. Morse & Co.....	17,100	5,700	106,400	.....=	129,200
Poel & Arnold.....	11,200	300	94,000	4,300=	109,800
Hagemeyer & Brunn.....	4,700	.....	1,600	.....=	6,300
Lionel Hagenauers & Co.....	5,100	.....	900	.....=	6,000
Total.....	204,200	77,700	297,900	8,500=	588,300

October 27.—By the steamer *Gregory*, from Manáos and Pará:

Poel & Arnold.....	211,200	38,400	117,300	300=	367,200
A. T. Morse & Co.....	179,600	31,100	61,600	700=	273,000
General Rubber Co.....	132,800	28,800	74,000	5,100=	240,700
New York Commercial Co.....	90,400	20,600	51,500	2,100=	164,600
Hagemeyer & Brunn.....	19,100	5,700	7,200	.....=	32,000
Lionel Hagenauers & Co.....	14,100	.....	1,300	.....=	15,400
Edmund Reeks & Co.....	7,800	1,800	3,700	.....=	13,300
Total.....	655,000	126,400	316,600	8,200=	1,106,200

[NOTE.—The steamer *Bonifacio*, from Pará, is due at New York on November 2, with 360 tons Rubber.]

OCT. 24.—By the *Umbria*=Liverpool:

George A. Alden & Co. (Fine).....	45,000
Poel & Arnold (Fine).....	4,200 49,500

OTHER ARRIVALS IN NEW YORK CENTRALS.

	SEPT. 26.—By the <i>Roman Prince</i> =Bahia:
J. H. Rossbach & Bros.....	23,000
Hirsch & Kaiser.....	14,500 37,500

CENTRALS—Continued.

SEPT. 26.—By the <i>Celtic</i> =Liverpool:	
Wallace L. Gough.....	6,000
SEPT. 26.—By the <i>Vigilancia</i> =Mexico:	
Harburger & Stack.....	2,500
E. Steiger & Co.....	500
H. Marquardt & Co.....	800
L. N. Chemedin & Co.....	400
E. N. Tibbals & Co.....	200 4,200
SEPT. 26.—By the <i>Proteus</i> =New Orleans:	
Manhattan Rubber Mfg. Co.....	1,000
A. N. Rotholz.....	1,000 2,000
SEPT. 28.—By the <i>Yucatan</i> =Colon:	
Hirzel, Feltman & Co.....	14,700
J. A. Medina & Co.....	8,800
Lawrence Johnson & Co.....	7,000
G. Amsinck & Co.....	5,500
Dumarest Bros. & Co.....	5,600
George A. Alden & Co.....	3,300
A. Santos & Co.....	3,400
Roldan & Van Sickle.....	2,800
A. M. Capens Sons.....	2,600
Isaac Brandon & Bros.....	1,800
E. B. Strout.....	1,700
Meyer & Hecht.....	1,200
Silva, Bussenius & Co.....	700
Graham, Hinkley & Co.....	600
A. Held.....	400
Eggers & Heinlein.....	400
Harburger & Stack.....	500
R. G. Barthold.....	400
American Trading Co.....	400
A. Rosenthal & Sons.....	200
De Sola, Lobo & Co.....	200 62,200
SEPT. 30.—By the <i>Carpathia</i> =Liverpool:	
Hirsch & Kaiser.....	16,000
OCT. 1.—By the <i>El Monte</i> =New Orleans:	
A. T. Morse & Co.....	5,500
A. N. Rotholz.....	1,000
Eggers & Heinlein.....	1,000 7,500
OCT. 5.—By the <i>Sibiria</i> =Cartagena, etc.:	
Isaac Kubic & Co.....	4,500
A. T. Hanneburg.....	3,000
G. Amsinck & Co.....	1,500
Pedro A. Lopez.....	1,000
Cadenas & Cos.....	1,000
Graham, Hinkley & Co.....	600
Kunhardt & Co.....	400 12,000
OCT. 8.—By the <i>Monterey</i> =Mexico:	
Fred Probst & Co.....	1,000
H. Marquardt & Co.....	500
E. Steiger & Co.....	400
E. N. Tibbals & Co.....	300
Graham, Hinkley & Co.....	300 2,800
OCT. 10.—By the <i>Altai</i> =Greytown:	
E. B. Strout.....	8,000
G. Amsinck & Co.....	6,800
Livingstone & Co.....	2,800
Andreas & Co.....	1,000
American Trading Co.....	800
D. A. De Lima & Co.....	600
A. D. Straus & Co.....	500
M. C. A. Delgado.....	500
Graham, Hinkley & Co.....	500 20,500
OCT. 12.—By the <i>Finances</i> =Colon:	
J. A. Medina & Co.....	4,200
G. Amsinck & Co.....	3,000
Lawrence Johnson & Co.....	2,200
Eggers & Heinlein.....	2,000
Isaac Brandon & Bros.....	1,900
Silva, Bussenius & Co.....	900
Piza Nephews & Co.....	800
R. G. Barthold.....	400 15,400
OCT. 12.—By the <i>Oceanic</i> =Liverpool:	
G. Amsinck & Co.....	4,500
Wallace L. Gough.....	4,500 9,000
OCT. 14.—By the <i>El Valle</i> =New Orleans:	
A. T. Morse & Co.....	4,500
Eggers & Heinlein.....	2,000
A. N. Rotholz.....	1,500
Manhattan Rubber Mfg. Co.....	1,000
G. Amsinck & Co.....	1,000 10,000
OCT. 15.—By the <i>Theopsis</i> =Bahia, etc.:	
J. H. Rossbach & Bros.....	33,500
Hirsch & Kaiser.....	12,500
Lawrence Johnson & Co.....	4,500 50,500
OCT. 18.—By the <i>Comus</i> =New Orleans:	
A. T. Morse & Co.....	7,000
A. N. Rotholz.....	1,000 8,000
OCT. 15.—By the <i>Lucania</i> =Liverpool:	
Geo. A. Alden & Co.....	13,500
OCT. 20.—By the <i>Soldier Prince</i> =Bahia:	
J. H. Rossbach & Bros.....	27,000
Hirsch & Kaiser.....	16,000
Emile Borla.....	3,000 46,000

CENTRAS—Continued.

OCT. 16.—By the <i>Advance</i> =Colon:	
Hirzel, Feltman & Co.....	2,500
Lawrence Johnson & Co.....	1,900
Silva, Bussenius & Co.....	1,800
Graham, Hinkley & Co.....	1,500
Pedro A. Lopez.....	800
Smithers, Nordenholt & Co.....	800
G. Amsinck & Co.....	600
Isaac Brandon & Bros.....	500
John Boyd, Jr. & Co.....	500
Eggers & Heinlein.....	400 11,900
OCT. 22.—By the <i>Vigilancia</i> =Mexico:	
E. Steiger & Co.....	700
H. Marquardt & Co.....	500
L. N. Chemedin & Co.....	500
E. N. Tibbals & Co.....	300
For Hamburg, etc.....	4,000 6,000
OCT. 24.—By the <i>Byron</i> =Bahia:	
J. H. Rossbach & Bros.....	25,000
Hirsch & Kaiser.....	16,000
A. D. Hitch & Co.....	3,500
Lawrence Johnson & Co.....	1,500 46,000

AFRICANS.

SEPT. 23.—By the <i>Phoenix</i> =Hamburg:	
A. T. Morse & Co.....	38,000
George A. Alden & Co.....	7,000 45,000
SEPT. 26.—By the <i>Umbria</i> =Liverpool:	
A. T. Morse & Co.....	6,500
George A. Alden & Co.....	5,000 11,500
SEPT. 26.—By the <i>Celtic</i> =Liverpool:	
Poel & Arnold.....	18,000
SEPT. 29.—By the <i>Pretoria</i> =Hamburg:	
A. T. Morse & Co.....	30,000
SEPT. 29.—By the <i>Baltic</i> =Liverpool:	
A. T. Morse & Co.....	11,000
Poel & Arnold.....	5,000
Windmuller & Reolker.....	2,000 18,000
OCT. 4.—By the <i>Bowie</i> =Liverpool:	
General Rubber Co.....	78,000
OCT. 4.—By the <i>Zeeland</i> =Antwerp:	
A. T. Morse & Co.....	18,500
Rubber Trading Co.....	6,000 19,500
OCT. 6.—By the <i>Graf Waldersee</i> =Hamburg:	
George A. Alden & Co.....	25,000
Poel & Arnold.....	3,500 29,500
OCT. 6.—By the <i>Majette</i> =Liverpool:	
A. T. Morse & Co.....	3,000
Rubber Trading Co.....	2,000
Henry A. Gould Co.....	2,500 7,500
OCT. 10.—By the <i>Cedric</i> =Liverpool:	
Wallace L. Gough.....	11,500
Poel & Arnold.....	2,000 13,500
OCT. 8.—By the <i>Etruria</i> =Liverpool:	
General Rubber Co.....	34,000
George A. Alden & Co.....	8,000 42,000
OCT. 11.—By the <i>Finland</i> =Antwerp:	
George A. Alden & Co.....	290,000
Joseph Cantor.....	43,000
Rubber Trading Co.....	4,500 337,500
OCT. 12.—By the <i>Oceanic</i> =Liverpool:	
A. T. Morse & Co.....	13,000
OCT. 15.—By the <i>Lucania</i> =Liverpool:	
George A. Alden & Co.....	85,000
Wallace L. Gough.....	13,500 98,500
OCT. 17.—By the <i>Arabic</i> =Liverpool:	
General Rubber Co.....	22,500
Wallace L. Gough.....	20,000
Henry A. Gould Co.....	13,500 56,000
OCT. 18.—By the <i>Noordam</i> =Rotterdam:	
George A. Alden & Co.....	22,500
OCT. 20.—By the <i>Teutonic</i> =Liverpool:	
A. T. Morse & Co.....	22,500
Rubber Trading Co.....	11,500 34,000
OCT. 20.—By the <i>Pennsylvania</i> =Hamburg:	
Poel & Arnold.....	70,000
George A. Alden & Co.....	18,000
Rubber Trading Co.....	6,000
A. T. Morse & Co.....	5,000 96,000
OCT. 24.—By the <i>Umbria</i> =Liverpool:	
George A. Alden & Co.....	45,000
A. T. Morse & Co.....	27,000 72,000
OCT. 24.—By the <i>Celtic</i> =Liverpool:	
Poel & Arnold.....	4,500
Wallace L. Gough.....	3,600
Windmuller & Reolker.....	3,500 11,500

EAST INDIAN.

OCT. 7.—By the <i>Tioga</i> =Calcutta:	
Poel & Arnold.....	3,500
OCT. 11.—By the <i>St. Fillans</i> =Singapore:	
Winter & Smille.....	22,000
Poel & Arnold.....	15,000
Robert Branss & Co.....	25,000
Pierre T. Betts.....	28,000 90,000
OCT. 11.—By the <i>Germanic</i> =London:	
Poel & Arnold.....	23,000
Wallace L. Gough.....	9,000 32,000
OCT. 13.—By the <i>Bedouin</i> =Singapore:	
Winter & Smille.....	15,000
Pierre T. Betts.....	10,000 25,000
OCT. 17.—By the <i>Minnetonka</i> =London:	
Poel & Arnold.....	15,000
OCT. 24.—By the <i>St. Paul</i> =London:	
Poel & Arnold.....	22,500

GUTTA-JELUTONG.

OCT. 11.—By the <i>St. Fillans</i> =Singapore:	
George A. Alden & Co.....	315,000
Poel & Arnold.....	105,000
Robert Branss & Co.....	50,000
D. A. Shaw & Co.....	30,000 500,000
OCT. 13.—By the <i>Bedouin</i> =Singapore:	
George A. Alden & Co.....	250,000
Robert Branss & Co.....	45,000 295,000

GUTTA-PERCHA AND BALATA.	
SEPT. 23.—By the <i>Phoenix</i> =Hamburg:	
To Order.....	6,000
SEPT. 26.—By the <i>Pretoria</i> =Hamburg:	
To Order.....	16,000
OCT. 10.—By the <i>Hamburg</i> =Hamburg:	
R. F. Downing & Co.....	2,500
OCT. 15.—By the <i>Lucania</i> =Liverpool:	
Earle Brothers.....	2,500
Windmuller & Reolker.....	2,000 4,500
OCT. 20.—By the <i>Pennsylvania</i> =Hamburg:	
To Order.....	7,500

BALATA.

SEPT. 26.—By the <i>Minnehaha</i> =London:	
Earle Brothers.....	2,500
SEPT. 29.—By the <i>Procidia</i> =Demerara, etc.:	
Middleton & Co.....	13,500
Arkell & Douglass.....	2,500
Frame & Co.....	2,000 18,000
OCT. 1.—By the <i>Philadelphia</i> =London:	
Earle Brothers.....	4,500
OCT. 7.—By the <i>Alliance</i> =La Guayra, etc.:	
American Trading Co.....	2,500
Middleton & Co.....	1,000
Frame & Co.....	1,500 5,000
OCT. 24.—By the <i>Fontabelle</i> =Demerara:	
Leaycraft & Co.....	3,500
Middleton & Co.....	3,000 6,500

CUSTOM HOUSE STATISTICS.

PORT OF NEW YORK—SEPTEMBER.

Imports:	POUNDS.	VALUE.
India-rubber.....	2,782,634	\$1,947,641
Gutta-percha.....	44,409	21,376
Gutta-jelutong (Fontianak) ..	1,446,065	44,554
Total.....	4,273,098	\$2,013,571

Exports:	POUNDS.	VALUE.
India-rubber.....	39,608	\$30,613
Reclaimed rubber.....	313,496	39,740
Rubber Scrap Imported.....	842,522	\$51,408

BOSTON ARRIVALS.

SEPT. 7.—By the <i>Lancastrian</i> =London:	
George A. Alden & Co.—East Indian.....	16,631
SEPT. 10.—By the <i>Saxon</i> =Liverpool:	
George A. Alden & Co.—African.....	11,260
SEPT. 13.—By the <i>Winfredian</i> =Liverpool:	

George A. Alden & Co.—African....	1,287	SEPT. 26.—By the Columbian=London:		GUTTA-PERCHA.	
SEPT. 22.—By the Anglian=London:		George A. Alden & Co.—East Indian.	13,308	SEPT. 2.—By the Seneca=Singapore:	
George A. Alden & Co.—East Indian.	5,195	SEPT. 28.—By the Cretic=Liverpool:		Winter & Smillie—Jelutong (Pontianak)	112,227
SEPT. 26.—By the Columbian=London:		C. M. Hawthaway & Sons—African...	568	SEPT. 2.—By the Seneca=Singapore:	
George A. Alden & Co.—African....	582	Total.....	60,772	Winter & Smillie—Gutta-percha....	11,170
SEPT. 24.—By the Fernia=Liverpool:		[Value, \$40,117.]		Total.....	123,397
George A. Alden & Co.—Central....	12,001			[Value, \$4,266.]	

SEPTEMBER EXPORTS OF INDIA-RUBBER FROM PARA (KILOGRAMS).

EXPORTERS.	UNITED STATES.					EUROPE.					TOTAL
	FINE.	MEDIUM.	COARSE.	CAUCHO.	TOTAL.	FINE.	MEDIUM.	COARSE.	CAUCHO.	TOTAL.	
Adelbert H. Alden.....	71,020	15,490	78,870	900	166,280	86,850	14,190	10,900	3,600	115,540	281,820
Frank da Costa & Co.....	1,754	147	118,866	—	120,767	67,032	6,764	23,384	7,950	105,130	225,897
Emok, Schrader & Co.....	21,080	5,270	52,400	—	78,750	61,540	5,950	22,460	450	90,400	169,150
Neale & Staats.....	—	—	36,972	—	36,972	53,098	6,878	2,844	—	62,820	99,792
J. Marques & Co.....	17,033	—	7,579	—	24,612	35,379	1,173	7,665	—	44,217	68,829
Singlehurst Brocklehurst & Co.	—	—	2,225	—	2,225	8,566	933	1,914	1,804	13,217	15,442
R. Suarez & Co.....	—	—	—	—	—	8,179	4,105	2,341	—	14,625	14,625
Pires, Teixeira & Co.....	9,993	—	2,607	—	12,600	—	—	—	—	—	12,600
Direct from Manáos.....	315,467	72,926	59,344	7,405	455,142	264,228	40,301	40,183	44,163	388,875	844,017
Total.....	430,347	93,833	358,863	8,305	897,348	584,872	80,294	111,691	57,967	834,824	1,732,172
Total January-June.....	4,868,612	1,038,149	2,726,135	1,036,076	8,873,879	4,803,518	589,529	1,328,363	2,282,155	9,003,565	17,877,444
	4,195,045	1,131,774	2,401,598	1,111,084	9,513,068	3,353,916	732,916	1,408,662	1,980,886	7,476,380	16,989,448

INDIA-RUBBER EXPORTS FROM THE AMAZON RIVER, 1903-04 (POUNDS).

INCLUDING direct shipments from Iquitos (Peru) and Serpa (state of Amazonas), and rubber in transit from Bolivia (registered at Manáos), compiled from figures furnished to the British Board of Trade, by the British consul at Pará:

SOURCES.	UNITED STATES.					EUROPE.					TOTAL.
	FINE.	MEDIUM.	COARSE.	CAUCHO.	TOTAL.	FINE.	MEDIUM.	COARSE.	CAUCHO.	TOTAL.	
From Manáos....	11,601,533	2,493,882	2,662,628	2,506,640	19,264,683	8,016,227	1,226,118	1,767,201	3,671,822	14,681,368	33,946,051
From Pará.....	4,661,075	858,039	8,299,503	144,205	13,962,822	8,845,161	957,852	3,737,495	1,408,973	14,949,481	28,912,303
From Iquitos....	6,611	395	2,315	16,283	25,604	1,370,621	222,157	549,510	2,277,977	4,420,265	4,445,869
From Serpa.....	—	—	—	—	—	8,356	—	2,520	—	10,876	10,876
Total.....	16,269,219	3,352,316	10,964,446	2,667,128	33,253,109	18,240,365	2,406,127	6,056,726	7,358,772	34,061,990	67,315,099

EXPORTS for 1902-03: To United States, 32,112,116 pounds; to Europe, 33,643,937 pounds; total, 65,756,053 pounds.

OFFICIAL STATISTICS OF CRUDE INDIA-RUBBER (POUNDS).

UNITED STATES.				GREAT BRITAIN.			
MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.	MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
August, 1904.....	3,941,141	241,094	3,700,047	August, 1904.....	3,306,800	2,687,776	619,024
January-July.....	37,689,032	1,979,724	35,709,308	January-July.....	34,992,048	19,453,286	15,538,762
Eight months, 1904.....	41,630,173	2,220,818	39,409,355	Eight months, 1904.....	38,298,848	22,141,062	16,157,786
Eight months, 1903.....	38,655,119	1,984,816	36,670,303	Eight months, 1903.....	35,090,272	25,428,032	9,662,240
Eight months, 1902.....	33,754,506	2,300,776	31,453,730	Eight months, 1902.....	31,948,784	20,225,068	11,723,716
GERMANY.				ITALY.			
MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.	MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
August, 1904.....	2,933,920	738,980	2,194,940	August, 1904.....	150,700	1,980	148,720
January-July.....	20,821,680	5,848,700	14,972,980	January-July.....	901,120	73,480	827,640
Eight months, 1904.....	23,755,600	6,587,680	17,167,920	Eight months, 1904.....	1,051,820	75,460	976,360
Eight months, 1903.....	23,468,940	7,768,420	15,700,520	Eight months, 1903.....	1,075,800	100,760	975,040
Eight months, 1902.....	22,307,780	8,774,260	13,533,520	Eight months, 1902.....	964,260	81,620	882,640
FRANCE.*				AUSTRIA-HUNGARY.			
MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.	MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
August, 1904.....	1,174,140	42,900	1,131,240	August, 1904.....	174,460	440	174,020
January-July.....	12,802,680	7,386,260	5,416,420	January-July.....	1,757,140	14,740	1,742,400
Eight months, 1904.....	13,976,820	7,431,160	6,545,660	Eight months, 1904.....	1,931,600	15,180	1,916,420
Eight months, 1903.....	10,738,430	6,118,200	4,620,230	Eight months, 1903.....	1,984,400	17,160	1,967,240
Eight months, 1902.....	11,578,160	5,625,840	5,952,320	Eight months, 1902.....	1,742,840	11,000	1,731,840

NOTE.—German statistics include Gutta-percha, Balata, old rubber, and substitutes. French, Austrian, and Italian figures include Gutta-percha. The exports from the United States embrace the supplies for Canada consumption.

* General Commerce.

